



AUDIT & ASSESSMENT OF QUALITY OF SERVICE

**NORTH ZONE – RAJASTHAN CIRCLE
CELLULAR MOBILE TELEPHONE SERVICE
(CMTS)
(OCTOBER TO DECEMBER 2015)**

PREPARED BY:

PHISTREAM CONSULTING PRIVATE LIMITED
(An ISO – 9001:2008 Certified Company)

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1. INTRODUCTION

1.1. ABOUT TRAI

TRAI's mission is to create and nurture conditions for growth of telecommunications in the country in a manner and at a pace that will enable India to play a leading role in the emerging global information society. One of the main objectives of TRAI is to provide a fair and transparent policy environment which promotes a level playing field and facilitates fair competition.

In pursuance of above objective, TRAI has been issuing regulations, order and directives to deal with the issues or complaints raised by the operators as well as the consumers. These regulations, order and directives have helped to nurture the growth of multi operator multi service - an open competitive market from a government owned monopoly. Also, the directions, orders and regulations issued cover a wide range of subjects including tariff, interconnection and quality of service as well as governance of the Authority.

TRAI initiated a regulation - The Standard of Quality of Service of Basic Telephone Service (Wireline) and Cellular Mobile Telephone Service regulations, 2009 (7 of 2009) dated June 20, 2009 and Quality of Service of Broadband Service Regulations, 2006 (11 of 2006) dated April 6, 2006 that provide the benchmarks for the parameters on customer perception of service to be achieved by service provider.

In order to assess the above regulations, TRAI has commissioned a third party agency to conduct the audit of the service providers and check the performance of the operators on the various benchmarks set by Telecom Regulatory Authority of India (TRAI).

1.2. ABOUT PHISTREAM CONSULTING PRIVATE LIMITED

Phistream Consulting Private Limited is an ISO:9001 certified company who are one of the pioneers in the field of technical audit, quality assurance and third party inspection services. Established more than a decade ago in 2004, we aspire to provide longer term savings based on year-on-year productivity. With our size, we are nimble and aspire to being a full service partner for providing consultancy services.

We have been helping our clients by determining the best solutions and enabling businesses to enjoy the benefits of top-notch support without distracting their team from the main business focus. Our business analysts have enough experience to get involved at the requirements gather stage through consulting work handing off a detailed requirements document to our operations staff who in turn can train our support and maintenance resources for ongoing engagement.

In keeping with our goal of being a one stop quality assurance and consulting partner, our specialists employ a strategy and consulting-based implementation methodology and capitalize on strong program governance to offer a wide range of services for various industry verticals.

1.3. OBJECTIVES

The primary objective of the Audit module is to:

- Audit and Assess the Quality of Services being rendered by Basic (Wireline), Cellular Mobile (Wireless), and Broadband service against the parameters notified by TRAI. (The parameters of Quality of Services (QoS) have been specified by in the respective regulations published by TRAI).
- This report covers the audit results of the audit conducted for Cellular Mobile (Wireless) services in Delhi circle.

1.4. COVERAGE

The audit was conducted in Delhi Circle covering all SSAs (Secondary Switching Areas).



Image Source: TTK Maps

1.5. SSA List

S. No.	Circle	SSA Name	SDCA Name
1	RJ	Ajmer	Ajmer
2	RJ	Ajmer	Beawar
3	RJ	Ajmer	Kekri (e)
4	RJ	Ajmer	Kekri (w) (bhinai)
5	RJ	Ajmer	Kishangarh (n) (roopangarh)
6	RJ	Ajmer	Kishangarh (s)
7	RJ	Ajmer	Nasirabad
8	RJ	Ajmer	Sarwar
9	RJ	Alwar	Alwar
10	RJ	Alwar	Bansur
11	RJ	Alwar	Behror
12	RJ	Alwar	Kishangarhbas (khairthal)
13	RJ	Alwar	Laxmangarh (kherli)
14	RJ	Alwar	Mandawar
15	RJ	Alwar	Rajgarh
16	RJ	Alwar	Ramgarh
17	RJ	Alwar	Thanaghazi
18	RJ	Alwar	Tijara (n) (bhiwadi)
19	RJ	Alwar	Tijara (s)
20	RJ	Banswara	Aspur
21	RJ	Banswara	Bagidora
22	RJ	Banswara	Banswara
23	RJ	Banswara	Dungarpur
24	RJ	Banswara	Gerhi (partapur)
25	RJ	Banswara	Ghatol
26	RJ	Banswara	Kushalgarh
27	RJ	Banswara	Sagwara
28	RJ	Barmer	Barmer(c)
29	RJ	Barmer	Barmer (e) (gudda)
30	RJ	Barmer	Barmer (n) (kanot)
31	RJ	Barmer	Barmer (s) sindari
32	RJ	Barmer	Barmer (sw) (dhorimanna)
33	RJ	Barmer	Barmer (w) (ramsar)
34	RJ	Barmer	Chohtan (n)
35	RJ	Barmer	Chohtan (s) (gangasar)
36	RJ	Barmer	Pachpadra (e) (korna)
37	RJ	Barmer	Pachpadra (w) (balotra)
38	RJ	Barmer	Sheo (e)
39	RJ	Barmer	Sheo (w) (harsani)
40	RJ	Barmer	Siwana (e) (samdari)
41	RJ	Barmer	Siwana (w)
42	RJ	Bharatpur	Bari
43	RJ	Bharatpur	Baseri
44	RJ	Bharatpur	Bayana
45	RJ	Bharatpur	Bharatpur
46	RJ	Bharatpur	Deeg
47	RJ	Bharatpur	Dholpur
48	RJ	Bharatpur	Kaman
49	RJ	Bharatpur	Nadbai
50	RJ	Bharatpur	Rupbas

51	RJ	Bhilwara	Asind
52	RJ	Bhilwara	Banera
53	RJ	Bhilwara	Bhilwara
54	RJ	Bhilwara	Hurda (gulabpura)
55	RJ	Bhilwara	Jahazpur
56	RJ	Bhilwara	Kotri
57	RJ	Bhilwara	Mandal
58	RJ	Bhilwara	Mandalgarh
59	RJ	Bhilwara	Raipur
60	RJ	Bhilwara	Shahapura
61	RJ	Bikaner	Bikaner(c) (jaimalsar)
62	RJ	Bikaner	Bikaner (e) (jamsar)
63	RJ	Bikaner	Bikaner (n) (chhatargarh)
64	RJ	Bikaner	Bikaner (s)
65	RJ	Bikaner	Bikaner (w) (poogal)
66	RJ	Bikaner	Kolayat-i (goddo)
67	RJ	Bikaner	Kolayat-ii
68	RJ	Bikaner	Kolayat-iii (bajju)
69	RJ	Bikaner	Kolayat-iv (daitra)
70	RJ	Bikaner	Lunkaransar-i (kanholi)
71	RJ	Bikaner	Lunkaransar-iii (rajasarb)
72	RJ	Bikaner	Lunkaransar-ii (mahajan)
73	RJ	Bikaner	Lunkaransar-iv
74	RJ	Bikaner	Nokha (e)
75	RJ	Bikaner	Nokha (w) (nathusar)
76	RJ	Bundi	Bundi
77	RJ	Bundi	Hindoli
78	RJ	Bundi	Keshoraipatan (patan)
79	RJ	Bundi	Nainwa
80	RJ	Chittorgarh	Barisadri
81	RJ	Chittorgarh	Begun(n)
82	RJ	Chittorgarh	Begun(s) (rawatbhata)
83	RJ	Chittorgarh	Chittorgarh
84	RJ	Chittorgarh	Dungla
85	RJ	Chittorgarh	Kapasan
86	RJ	Chittorgarh	Nimbahera
87	RJ	Chittorgarh	Pratapgarh (n)
88	RJ	Chittorgarh	Pratapgarh (s) (arnod)
89	RJ	Chittorgarh	Rashmi
90	RJ	Churu	Churu
91	RJ	Churu	Rajgarh
92	RJ	Churu	Ratangarh
93	RJ	Churu	Sardarshahar (s)
94	RJ	Churu	Sardarshahar (n) - jaitsisar
95	RJ	Churu	Sridungargarh (n)- dungargh
96	RJ	Churu	Sridungargarh (s) (sudsar)
97	RJ	Churu	Sujargarh(c) (bidasar)
98	RJ	Churu	Sujargarh (e)
99	RJ	Churu	Sujargarh (w) (lalgargh)
100	RJ	Churu	Taranagar
101	RJ	Jaipur	Amber (chomu)
102	RJ	Jaipur	Bassi
103	RJ	Jaipur	Baswa (bandikui)

104	RJ	Jaipur	Dausa
105	RJ	Jaipur	Dudu
106	RJ	Jaipur	Jaipur
107	RJ	Jaipur	Jamwa-ramgarh (achrol)
108	RJ	Jaipur	Kotputli
109	RJ	Jaipur	Lalsot
110	RJ	Jaipur	Phagi
111	RJ	Jaipur	Phulera (e) (renwal)
112	RJ	Jaipur	Phulera (w) (sambhar)
113	RJ	Jaipur	Viratnagar (shahpura)
114	RJ	Jaisalmer	Jaisalmer-1 (ramgarh)
115	RJ	Jaisalmer	Jaisalmer-10 (khuri)
116	RJ	Jaisalmer	Jaisalmer-11 (jaisalmer)
117	RJ	Jaisalmer	Jaisalmer-12 (devikot)
118	RJ	Jaisalmer	Jaisalmer-13 (myajlar)
119	RJ	Jaisalmer	Jaisalmer-14 (jheenjaniali)
120	RJ	Jaisalmer	Jaisalmer-2 (sadhna)
121	RJ	Jaisalmer	Jaisalmer-3 (nehdai)
122	RJ	Jaisalmer	Jaisalmer-4 (shahgarh)
123	RJ	Jaisalmer	Jaisalmer-5 (khuiyals)
124	RJ	Jaisalmer	Jaisalmer-6 (pasewar)
125	RJ	Jaisalmer	Jaisalmer-7 (mohargarh)
126	RJ	Jaisalmer	Jaisalmer-8 (mehsana)
127	RJ	Jaisalmer	Jaisalmer-9 (dhanaua)
128	RJ	Jaisalmer	Pokran-1 (nachna)
129	RJ	Jaisalmer	Pokran-2 (madasar)
130	RJ	Jaisalmer	Pokran-3 (loharki)
131	RJ	Jaisalmer	Pokran-4 (pokran)
132	RJ	Jaisalmer	Pokran-5 (phalsoond)
133	RJ	Jhalawar	Aklara
134	RJ	Jhalawar	Gangdhar
135	RJ	Jhalawar	Jhalawar
136	RJ	Jhalawar	Khanpur
137	RJ	Jhalawar	Pachpahar (bhawanimandi)
138	RJ	Jhalawar	Pirawa (raipur)
139	RJ	Jhunjhunu	Chirawa
140	RJ	Jhunjhunu	Jhunjhunu (n) (bissau)
141	RJ	Jhunjhunu	Jhunjhunu (s)
142	RJ	Jhunjhunu	Khetri
143	RJ	Jhunjhunu	Udaipurwati
144	RJ	Jodhpur	Bilara (n) (bhopalgarh)
145	RJ	Jodhpur	Bilara (s) (piparcity)
146	RJ	Jodhpur	Jodhpur (e)
147	RJ	Jodhpur	Jodhpur (w) (jhanwar)
148	RJ	Jodhpur	Osian (e) (dhanwara)
149	RJ	Jodhpur	Osian (n)
150	RJ	Jodhpur	Osian (s) (mathania)
151	RJ	Jodhpur	Phalodi (e) (lohawat)
152	RJ	Jodhpur	Phalodi (n) (bap)
153	RJ	Jodhpur	Phalodi (s)
154	RJ	Jodhpur	Phalodi (w) (baroo)
155	RJ	Jodhpur	Shergarh (n) (balesar)
156	RJ	Jodhpur	Shergarh (n) (deechu)

157	RJ	Kota	Atru
158	RJ	Kota	Baran
159	RJ	Kota	Chhabra
160	RJ	Kota	Chhipaborad
161	RJ	Kota	Digod (sultanpur)
162	RJ	Kota	Kishanganj (bhanwargarh)
163	RJ	Kota	Ladpura (kota)
164	RJ	Kota	Mangrol
165	RJ	Kota	Pipalda (sumerganj mandi)
166	RJ	Kota	Ramganj mandi
167	RJ	Kota	Sahabad
168	RJ	Kota	Sangod
169	RJ	Nagaur	Deedwana
170	RJ	Nagaur	Degana
171	RJ	Nagaur	Jayal
172	RJ	Nagaur	Ladnun
173	RJ	Nagaur	Merta (e) (merta-city)
174	RJ	Nagaur	Merta (w) (gotan)
175	RJ	Nagaur	Nagaur (e) (mundwa marwar)
176	RJ	Nagaur	Nagaur (n)
177	RJ	Nagaur	Nagaur (w) (khinwsar)
178	RJ	Nagaur	Nawa (kuchamancity)
179	RJ	Nagaur	Parbatsar (n) (makrana)
180	RJ	Nagaur	Parbatsar (s)
181	RJ	Pali (marwar)	Bali (n) (sumerpur)
182	RJ	Pali (marwar)	Bali (s)
183	RJ	Pali (marwar)	Desuri (rani)
184	RJ	Pali (marwar)	Jaitaran
185	RJ	Pali (marwar)	Marwar-jn
186	RJ	Pali (marwar)	Pali (n) (rohat)
187	RJ	Pali (marwar)	Pali (s)
188	RJ	Pali (marwar)	Raipur
189	RJ	Pali (marwar)	Sojat (sojat-city)
190	RJ	Sawaimadhopur	Bamanwas
191	RJ	Sawaimadhopur	Bonli
192	RJ	Sawaimadhopur	Gangapur
193	RJ	Sawaimadhopur	Hindaun
194	RJ	Sawaimadhopur	Karauli
195	RJ	Sawaimadhopur	Khandar
196	RJ	Sawaimadhopur	Mahuwa
197	RJ	Sawaimadhopur	Sapotra
198	RJ	Sawaimadhopur	Sawaimadhopur
199	RJ	Sikar	Dantaramgarh (e) (shyamji)
200	RJ	Sikar	Dantaramgarh (w)
201	RJ	Sikar	Fatehpur
202	RJ	Sikar	Laxmangarh (e)
203	RJ	Sikar	Laxmangarh (w) (nechwa)
204	RJ	Sikar	Neem ka thana
205	RJ	Sikar	Sikar
206	RJ	Sikar	Srimadhopur
207	RJ	Sirohi (abu road)	Abu road
208	RJ	Sirohi (abu road)	Ahore
209	RJ	Sirohi (abu road)	Bhinmal (n)

210	RJ	Sirohi (abu road)	Bhinmal (s) (jasawantpura)
211	RJ	Sirohi (abu road)	Jalore
212	RJ	Sirohi (abu road)	Jalore (w) (sayla)
213	RJ	Sirohi (abu road)	Pindwara
214	RJ	Sirohi (abu road)	Reodar
215	RJ	Sirohi (abu road)	Sanchoe (e)
216	RJ	Sirohi (abu road)	Sanchoe (w) (hadecha)
217	RJ	Sirohi (abu road)	Sheoganj (posaliyan)
218	RJ	Sirohi (abu road)	Sirohi
219	RJ	Sriganganagar	Anupgarh (e)
220	RJ	Sriganganagar	Anupgarh (w) (gharsana)
221	RJ	Sriganganagar	Bhadra
222	RJ	Sriganganagar	Hanumangarh
223	RJ	Sriganganagar	Nohar(c) (rawatsar)
224	RJ	Sriganganagar	Nohar (e)
225	RJ	Sriganganagar	Nohar (w) (jedasar)
226	RJ	Sriganganagar	Padampur
227	RJ	Sriganganagar	Raisinghnagar
228	RJ	Sriganganagar	Sadulshahar
229	RJ	Sriganganagar	Sangaria
230	RJ	Sriganganagar	Sriganganagar
231	RJ	Sriganganagar	Srikaranpur
232	RJ	Sriganganagar	Suratgarh (n) (goluwala)
233	RJ	Sriganganagar	Suratgarh (s)
234	RJ	Sriganganagar	Tibbi
235	RJ	Tonk	Deoli
236	RJ	Tonk	Malpura
237	RJ	Tonk	Newai
238	RJ	Tonk	Todaraisingh
239	RJ	Tonk	Tonk (n) (piploo)
240	RJ	Tonk	Tonk (s)
241	RJ	Tonk	Uniayara
242	RJ	Udaipur	Amet
243	RJ	Udaipur	Bhim (n)
244	RJ	Udaipur	Bhim (s) (dawer)
245	RJ	Udaipur	Deogarh
246	RJ	Udaipur	Dhariawad
247	RJ	Udaipur	Girwa (udaipur)
248	RJ	Udaipur	Gogunda
249	RJ	Udaipur	Jhadol
250	RJ	Udaipur	Kherwara
251	RJ	Udaipur	Kotra
252	RJ	Udaipur	Kumbalgarh (charbhujaji)
253	RJ	Udaipur	Malvi (fatehnagar)
254	RJ	Udaipur	Nathdwara
255	RJ	Udaipur	Rajsamand (kankorli)
256	RJ	Udaipur	Salumber
257	RJ	Udaipur	Sarada (chawand)
258	RJ	Udaipur	Vallabhnagar

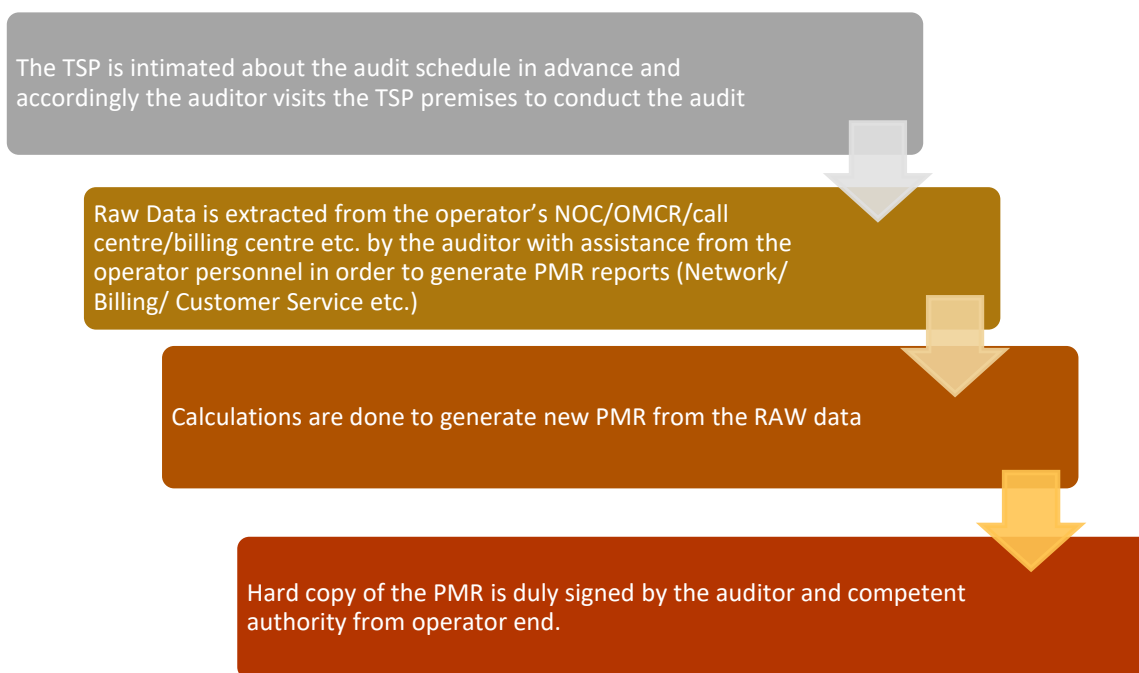
1.6. FRAMEWORK USED

Audit Activities

PMR Reports	Drive Test	CSD Audit	Wireline & Broadband	Inter Operator Call Assessment
Monthly PMR	Operator Assisted	Billing Complain	Billing Complain	
3 Days Live Data	Independent	Service request	Service Request	
Customer Service	Level 1 Service	Customer Service	Level 1 Service	
			Customer Service	

2. PMR REPORTS

Significance and methodology: PMR or Performance Monitoring Reports are generated to assess the various Quality of Service parameters involved in the mobile telephony service, which indicate the overall health of service for an operator.



The PMR report for network parameters is taken for each month of the audit quarter and is extracted and verified in the first week of the subsequent month of the audit month. For example, October 2015 audit data was collected in the month of November 2015.

The PMR report for customer service parameters is extracted from Customer Service Centre and verified once every quarter in the subsequent month of the last month of the quarter. For example, data for quarter ending December 2015 was collected in the month of December 2015.

The raw data extracted from operator's systems is used to create PMR in the following three formats:

- Monthly PMR (Network Parameters)
- 3 Day Live Measurement Data (Network Parameters)
- Customer Service Data

Let us understand these formats in details.

2.1. MONTHLY PMR

This involved calculation of the various Quality of Service network parameters through monthly Performance Monitoring Reports (PMR). The PMR reports were generated from the data extracted from operator's systems by the auditor with the assistance of the operator at the operator's premises for the month of October, November and December 2015. The performance of operators on various parameters was assessed against the benchmarks.

Parameters includes:

Network Availability

- BTS accumulated downtime
- Worst affected BTS due to downtime

Connection Establishment (Accessibility)

- Call Set Up success Rate (CSSR)

Network Congestion Parameters

- SDCCH/Paging Channel Congestion
- TCH Congestion
- Point of Interconnection

Connection Maintenance

- Call Drop rate
- Worst affected cells having more than 3% TCH drop

Voice Quality

- % Connections with good voice quality

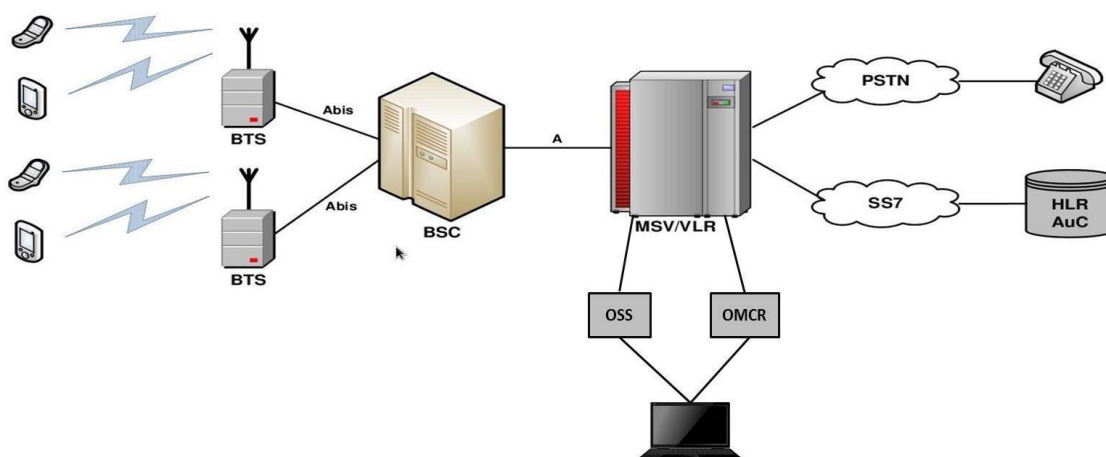
2.2. AUDIT PARAMETER: NETWORK

Let us now look at the various parameters involved in the audit reports.

Network Availability	
BTSs Accumulated downtime (not available for service)	$\leq 2\%$
Worst affected BTSs due to downtime	$\leq 2\%$
Connection Establishment (Accessibility)	
Call Set-up Success Rate (within licensee's own network)	$\geq 95\%$
SDCCH/ Paging Channel Congestion	$\leq 1\%$
TCH Congestion	$\leq 2\%$
Connection Maintenance (Retainability)	
Call Drop Rate	$\leq 2\%$
Worst affected cells having more than 3% TCH drop (call drop) rate	$\leq 3\%$
Connections with good voice quality	$\geq 95\%$
Point of Interconnection	
(POI) Congestion (on individual POI)	$\leq 0.5\%$

2.3. DATA EXTRACTION POINTS

The data is extracted from a terminal/computer connected to OMCR & OSS on the operator network.



2.4. AUDIT PROCEDURE

Tender document and latest list of licencees as per TRAI is taken as a reference document for assimilating the presence of operators. All the wireless operators are then informed about the audit schedule

Audit formats and schedule is shared with the operators in advance. Details include day of the visit and date of 3 day data collection and other requirements.

Auditors visit the operator's server/exchange/central NOC to extract data from operator's systems. Operator personnel assist the auditor in extraction process.

The extracted data is validated and verified by the Auditors.

Auditors then prepare a PMR report from the extracted data with assistance from the operator.

Extracted data is calculated as per the counter details provided by the operators. The details of counters have been provided in the report. The calculation methodology for each parameter has been stated in the table given below:

2.5. NETWORK CALCULATION METHODOLOGY

Parameter	Calculation Methodology
BTS Accumulated Downtime	Sum of downtime of BTSs in a month in hours i.e. total outage time of all BTSs in hours during a month / (24 x Number of days in a month x Number of BTSs in the network in licensed service area) x 100
Worst Affected BTS Due to Downtime	(Number of BTSs having accumulated downtime greater than 24 hours in a month / Number of BTS in Licensed Service Area) * 100
Call Setup Success Rate	(Calls Established / Total Call Attempts) * 100

SDCCH/ Paging Channel Congestion	$\text{SDCCH / TCH Congestion\%} = [(A1 \times C1) + (A2 \times C2) + \dots + (An \times Cn)] / (A1 + A2 + \dots + An)$ <p>Where: A1 = Number of attempts to establish SDCCH / TCH made on day 1 C1 = Average SDCCH / TCH Congestion % on day 1 A2 = Number of attempts to establish SDCCH / TCH made on day 2 C2 = Average SDCCH / TCH Congestion % on day 2</p>
TCH Congestion	$\text{C2} = \text{Average SDCCH / TCH Congestion \% on day 2}$ $\text{An} = \text{Number of attempts to establish SDCCH / TCH made on day n}$ $\text{Cn} = \text{Average SDCCH / TCH Congestion \% on day n}$
POI Congestion	$\text{POI Congestion\%} = [(A1 \times C1) + (A2 \times C2) + \dots + (An \times Cn)] / (A1 + A2 + \dots + An)$ <p>Where: A1 = POI traffic offered on all POIs (no. of calls) on day 1 C1 = Average POI Congestion % on day 1 A2 = POI traffic offered on all POIs (no. of calls) on day 2 C2 = Average POI Congestion % on day 2 An = POI traffic offered on all POIs (no. of calls) on day n Cn = Average POI Congestion % on day n</p>
Call Drop Rate	$\text{Total Calls Dropped / Total Calls Established} \times 100$
Worst Affected Cells having more than 3% TCH drop	$\text{Total number of cells having more than 3\% TCH drop during CBBH} / \text{Total number of cells in the LSA} \times 100$
Connections with good voice quality	$\text{No. of voice samples with good voice quality} / \text{Total number of samples} \times 100$

2.6. 3G VOICE

S. No.	Name of Parameter	Definition	Formula	Benchmark
1	Network Availability			
a.	Total no. of Node B's in LSA	Total no. of Node B's Licensed in LSA		
b.	Total downtime of all Node B's	When all the sector(s) of a Node B's are down for > 60 minutes at an instant in a whole day		
c.	No. of Worst Affected Node B's	Node B'ss having more than 24 hours of Downtime in 3 Days	$\text{No. of Node B's having accumulated downtime of >24 hours in a month}$ $((\text{No. of Node B's having Accumulated Downtime of > 24 hrs in a month}) / \text{Total no. of BTSs in the licensed service area}) \times 100$	<=2%
d.		Node B's downtime more than 24 hr in 3 days	Total no. of Node B's in the Licensed Service Area	<=2%

	Node B's accumulated downtime		Sum of downtime of Node B's in a month in hours i.e. total outage time of all Node B's in hours in a month	
			[(Sum of downtime of Node B's in a month in hrs)/(24* no. of days in the month*no. of Node B's in the licensed service area)]*100	
2	Connection Establishment (Accessibility)			
a.	Call Setup Success Rate:	It is the % of total no. of call established to the total no. of call attempt	Total No. of Voice Call Attempts	>=95%
			Total No. of Voice Call Establishment	
			CSSR (Call Setup Success Rate = (Total No. of Voice Call Attempts/ Total No. of Voice Call Establishment)*100)	
b.	RRC Congestion:	RRC Congestion rate is the % of Total No. of RRC Failed Calls to the Total no. of RRC Assigned Calls	RRC Attempts (RRC Connection Access) (A)	<=1%
			RRC Failed (RRC Connection Access Failed) (B)	
			RRC Congestion (%) [B/A]*100	
c.	RAB Congestion:	RAB Congestion rate is the % of Total No. of RAB Failed Calls to the Total no. of RAB Assigned Calls	RAB Attempts (RAB Setup Access) (C)	<=2%
			RAB Failed (RAB Setup Access Failed) (D)	
			RAB Congestion (%) [D/C]*100	
3	Connection Maintenance (Retainability)			
a.	Circuit Switched Voice Drop Rate	It is the % of total no. of Dropped Calls to the total no. of Calls Established	Total Established Calls (A)	<=2%
			Calls Dropped after Establishment (B)	
			Call Drop Rate [B/A]*100	
b.	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate:	It is the % of total no. of Cells having > 3% Circuit Switched Voice drop to the total no. cells	Total No. of Cells (Sector)	<=3%
			Total No. of Cells exceeding 3% Circuit Switched Voice Drop Rate in CBBH (Cell Bouncing Busy Hour)	
			% of cells having more than 3% Circuit Switched Voice Drop Rate [(No. of cells having Circuit Switched Voice Drop Rate > 3% during CBBH in 31 days*100) / Total no. of cells in the licensed service area]	
c.	Percentage of connections with Good Circuit Switched Voice Quality	It can be defined as the % of Good Voice Quality Samples to the total No. of Quality Samples	Percentage of connection with Good Circuit Switched Voice Quality	>=95%
4	Total No. of POI's in Month having >=0.5% POI congestion	Total no. Of POI's which are exceeding the POI congestion more than 0.5 %.	Total No. of call attempts on POI	<=0.5%
			Total traffic served on all POIs (Erlang)	
			Total No. of circuits on all individual POIs	

			Total number of working POI Service Area wise	
			Capacity of all POIs	
			No. of all POI's having $\geq 0.5\%$ POI congestion	
			Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)	

2.7. 2G & 3G WIRELESS

S. No.	Name of Parameter	Definition	Formula	Benchmark
1	Service Activation/ Provisioning	This refers to the activation of services after activation of the SIM. This involves programming the various databases with the customer's information and any gateways to standard Internet chat or mail services or any data services.	Total No. of Subscribers for Service Activation (A)	Within 4 Hours with 95% Success Rate
			Total Service Activations provided within 4 Hours (B)	
			Service Activation / Provisioning = $(B/A) * 100$	
2	PDP Context Activation Success Rate	PDP Context Activation Success Rate is the ratio of total number of successfully completed PDP context activations to the total attempts of context activation	Total No. of PDP Context Activation Requests (from SGSN to GGSN) (A)	$\geq 95\%$
			Total No. of PDP Context Activation Success (path created b/w SGSN and GGSN) (B)	
			PDP Context Activation Success Rate = $(B/A) * 100$	
3	Drop Rate	It measures the inability of Network to maintain a connection and is defined as the ratio of abnormal disconnects w.r.t. all disconnects.	RNC originated PS Domain Iu Connection Setup Success (A)	$\leq 5\%$
			RNC originated PS Domain Iu Connection Release (B)	
			Drop Rate = $(B/A) * 100$	

3. 3 DAYS LIVE DATA

The main purpose of 3 day live measurement is to evaluate the network parameters on intraday basis. While the monthly PMR report provides an overall view of the performance of QoS parameters, the 3 day live data helps looking at intraday performance on the network parameters discussed earlier. All the calculations are done on the basis of that raw data of 3 days.

The 3 day live data provides a sample of 9 days in a quarter (3 days each month of a quarter) with hourly performance, which enables the auditor to identify and validate intraday issues for an operator on the QoS network parameters. For example, network congestion being faced by an operator during busy/peak hours.

Network related parameters were evaluated for a period of 3 days in each month. 3 day live audit was conducted for 3 consecutive weekdays for each month. The data was extracted from each operator's server/ NOC etc. at the end of the 3rd day. The extracted data is then used to create a report (similar to PMR report) to assess the various QoS parameters.

3.1. TCBH: SIGNIFICANCE AND SELECTION METHODOLOGY

As per QoS regulations 2009 (7 of 2009), Time Consistent Busy Hour" or "TCBH" means the one hour period starting at the same time each day for which the average traffic of the resource group concerned is greatest over the days under consideration and such Time Consistent Busy Hour shall be established on the basis of analysis of traffic data for a period of ninety days.

Daywise RAW Data is fetched from the operator's OMCR and kept in readable format (preferably in MS- Excel). Data for a period of 90 days is used to identify TCBH.

90 Days period is decided upon the basis of month of audit. For example, for the audit of December 2015, the 90 day period data used to identify TCBH would be the data of October, November & December 2015.

For each day, the hour in which average traffic of the resource group concerned is greatest for the day will be the 'Busy Hour' for the operator.

The model frequency of the busy hour is calculated for 90 days period and the hour with highest model frequency will be considered as TCBH for the operator.

During audit, the auditors identified from the raw data that the TCBH for the operators in Oct – Nov – Dec 2015 was the time period as given below:

Aircel	Airtel	BSNL	Idea	RCOM GSM	RCOM CDMA	MTS	TTSL CDMA	TTSL GSM	Vodafone
19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00	19:00-20:00

3.2. CBBH: SIGNIFICANCE AND SELECTION METHODOLOGY

As per QoS regulations 2009 (7 of 2009), Cell Bouncing Busy Hour (CBBH) means the one hour period in a day during which a cell in cellular mobile telephone network experiences the maximum traffic.

Step by step procedure to identify CBBH for an operator:

Daywise RAW Data is fetched from the operator's OMCR and kept in readable format (preferably in MS- Excel). Data for a period of 90 days is used to identify CBBH.

For each day the hour in which a cell in cellular mobile telephone network experiences maximum traffic for the day will be the 'Busy Hour' for the operator.

The model frequency of the busy hour is calculated for 90 days period and the hour with highest model frequency will be considered as CBBH for the operator.

4. CUSTOMER SERVICE PARAMETERS

The data to generate PMR report for customer service parameters is extracted at the operator premises and verified once every quarter in the subsequent month of the last month of the quarter. For example, data for quarter ending December 2015 was collected in the month of December 2015. To extract the data for customer service parameters for the purpose of audit, auditors primarily visit the following locations/ departments/ offices at the operator's end.

- Central Billing Center
- Central Customer Service Center

The operators are duly informed in advance about the audit schedule.

The Customer Service Quality Parameters include the following:

- Metering and billing credibility (post-paid and prepaid)
- Resolution of billing/charging complaints
- Period of applying credit/waiver/adjustment to customer's account
- Response time to the customer for assistance
- Termination/closure of service
- Time taken for refund of security deposit after closures.

Most of the customer service parameters were calculated by averaging over the quarter; however billing parameters were calculated by averaging over one billing cycle for a quarter. All the parameters have been described in detail along with key findings of the parameter in the report.

The benchmark values for each parameter have been given in the table below.

4.1. AUDIT PARAMETERS: CUSTOMER SERVICE

Metering and Billing Credibility	Benchmark
No of billing complaints received - Post paid	≤ 0.1%
No. of billing complaints received- Prepaid	≤ 0.1%
Resolution of billing/ charging complaints within 4 weeks	98%
Resolution of billing/ charging complaints within 6 weeks	100%
Period of applying credit/ waiver within 1 week of resolution of complaint	100%
Response Time to the Customer form Assistance	
Accessibility of call centre/customer care	≥ 95%
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%
Termination/ closure of service	≤ 7 days
Time taken for refund of deposits after closures within 60 days	100%

4.2. CALCULATION METHODOLOGY: CUSTOMER SERVICE PARAMETER

Parameter	Calculation Methodology
Metering and billing credibility : Post-paid	Total billing complaints received during the relevant billing cycle / Total bills generated during the relevant billing cycle * 100
Metering and billing credibility : Pre-paid	Total charging complaints received during the quarter/ Total number of subscribers reported by the operator at the end of the quarter * 100
Resolution of billing/ charging complaints (Post-paid + Pre-paid)	<p>There are two benchmarks involved here:</p> <p>Billing or Charging Complaints resolved in 4 weeks from date of receipt / Total billing or charging complaints received during the quarter) x 100</p> <p>Billing or Charging Complaints resolved in 6 weeks from date of receipt / Total billing or charging complaints received during the quarter) x 100</p>
Period of applying credit waiver	Number of cases where credit waiver is applied within 7 days/ total number of cases eligible for credit waiver * 100
Call centre performance IVR (Calling getting connected and answered by IVR)	Number of calls connected and answered by IVR/ All calls attempted to IVR * 100
Call centre performance (Voice to Voice)	<p>Call centre performance Voice to Voice = (Number of calls answered by operator within 90 seconds/ All calls attempted to connect to the operator) * 100</p> <p>The calculation excludes the calls dropped before 90 seconds</p>
Time taken for termination/ closure of service	Number of closures done within 7 days/ total number of closure requests * 100
Time taken for refund for deposit after closures	Number of cases of refund after closure done within 60 days/ total number of cases of refund after closure * 100

4.3. LIVE CALLING: SIGNIFICANCE AND METHODOLOGY

The auditor visits the operator premises for Live Calling. The operators provide the RAW data of customer complaints (billing and services) and also the list of customer service numbers to be verified through live calling

The auditor makes the live calls using operator SIM to a random sample of subscribers from the RAW data provided to verify the resolution of complaints

The auditor verifies the performance of call centre, level 1 services by calling the numbers using operator SIM. The list of call centre numbers is provided by the operator.

The auditors also make test calls to subscribers of other operators to assess the inter-operator call connectivity in the same licensed service area

Live calling activity was carried out during the period of December 2015. The data considered for live calling was for the month prior to the month in which the live calling activity was being conducted. In this case, data of October 2015 was considered for live calling activity conducted in November 2015. A detailed explanation of each parameter is explained below:

4.4. BILLING COMPLAINTS

Live calling is done to verify Resolution of billing complaints within stipulated time. The process for this parameter is stated below:

- Auditors request the operator provided the database of all the subscribers who reported billing complaints in one month prior to the auditor visit. In case of BSNL, data for the complaints from the subscribers belonging to the sample exchanges is requested specifically.
- A sample of 10% or 100 complainants, whichever is less, is selected randomly from the list provided by operator.

Calls are made by auditors to the sample of subscribers to check and record whether the complaint was resolved within the timeframes as mentioned in the benchmark.

All the complaints related to billing as per clause 3.7.2 of QoS regulation of 20th June, 2015 were considered as population for selection of samples.

TRAI Benchmark: Resolution of billing/ charging complaints: 98% within 4 weeks, 100% within 6 weeks.

4.5. SERVICE COMPLAINTS REQUESTS

“Service request” means a request made to a service provider by its consumer pertaining to his account, and includes:

- A request for change of tariff plan
- A request for activation or deactivation of a value added service or a supplementary service or a special pack
- A request for activation of any service available on the service provider’s network
- A request for shift or closure or termination of service or for billing details

All the complaints other than billing were covered. A total of 100 calls per service provider for each service in licensed service area were done by the auditors.

4.6. LEVEL 1

Level 1 is used for accessing special services like emergency services, supplementary services, inquiry and operator-assisted services.

Level 1 Services include services such as police, fire, ambulance (Emergency services). Test calls were made from operator SIMs. A total of 150 test calls were made per service provider in the quarter.

While most of the Level 1 services are toll free, it has been observed that some Level 1 services may not be toll free. In October, November and December’15, auditor has tried contacting the list of Level 1 services provided by TRAI as per the NNP (National Numbering Plan).

4.6.1. PROCESS TO TEST LEVEL 1 SERVICE

- During the operator assisted drive test, auditors ask the operator authorized personnel to make 5 calls in each SDCA on the Level 1 Service numbers provided by TRAI. The list contains a description of the numbers along with dialling code.
- Operators might also provide a list of L1 services. To identify emergency L1 service numbers, auditors check if there is any number that starts with code ‘10’ in that list. If auditors find any emergency number in addition to the below list, that number is also tested during live calling.
- On receiving the list, auditors verify it if the below given list of numbers are active in the service provider’s network.
- If there are any other additional numbers provided by the operator, auditors also do live calling on those numbers along with below list.
- If any of these numbers is not active, then we would write the same in our report, auditors write in the report.
- Post verifying the list, auditors do live calling by equally distributing the calls among the various numbers and update the results in the live calling sheet.

L1 Number Details
100 Police
101 Fire
102 Ambulance
104 Health Information Helpline

108 Emergency and Disaster Management Helpline
138 All India Helpline for Passengers
149 Public Road Transport Utility Service
181 Chief Minister Helpline
182 Indian Railway Security Helpline
1033 Road Accident Management Service
1037 Public Grievance Cell DoT HQ as 'Telecom Consumer Grievance Redressal Helpline'
1056 Emergency Medical Services
106X State of the Art Hospitals - AIIMS
1063 Public Grievance Cell DoT Hq
1064 Anti Corruption Helpline
1070 Relief Commission for Natural Calamities
1071 Air Accident Helpline
1072 Rail Accident Helpline
1073 Road Accident Helpline
1077 Control Room for District Collector
1090 Call Alart (Crime Branch)
1091 Women Helpline
1097 National AIDS Helpline to NACO
1099 Central Accident and Trauma Services (CATS)
10580 Educational& Vocational Guidance and Counselling
10589 Mother and Child Tracking (MCTH)
10740 Central Pollution Control Board
10741 Pollution Control Board
1511 Police Related Service for all Metro Railway Project
1512 Prevention of Crime in Railway
1514 National Career Service(NCS)
15100 Free Legal Service Helpline
155304 Municipal Corporations
155214 Labour Helpline
1903 Sashastra Seema Bal (SSB)
1909 National Do Not Call Registry
1912 Complaint of Electricity
1916 Drinking Water Supply
1950 Election Commission of India

4.7. CUSTOMER CARE

Live calling is done to verify response time for customer assistance is done to verify the performance of call centre in terms of:

- Calls getting connected and answered by operator's IVR.
- % age of calls answered by operator / voice to voice) within 90 seconds: In 95% of the cases or more

The process for this parameter is stated below:

- Overall sample size is 100 calls per service provider per circle at different points of time, evenly distributed across the selected exchanges – 50 calls between 1100 HRS to 1400 HRS and 50 calls between 1600 HRS to 1900 HRS.

- Time to answer the call by the operator was assessed from the time interviewer pressed the requisite button for being assisted by the operator.
- All the supplementary services that have any kind of human intervention are to be covered here. It also includes the IVR assisted services.

4.8. INTER OPERATOR CALL ASSESSMENT

A total of 100 calls per service provider to all the other service providers in a licensed service area were done for the purpose of audit.

Inter Operator Call Assessment	Aircel	Airtel	BSNL	Idea	RCOM GSM	RCOM CDMA	TTSL CDMA	TTSL GSM	Vodafone	MTS
Aircel	-	99%	99%	99%	99%	100%	99%	99%	99%	100%
Airtel	99%	-	98%	99%	98%	97%	98%	98%	100%	97%
BSNL	98%	100%	-	98%	100%	98%	97%	99%	98%	98%
Idea	100%	100%	100%	-	100%	97%	100%	100%	100%	99%
RCOM GSM	98%	97%	97%	98%	-	100%	99%	99%	98%	100%
RCOM CDMA	97%	100%	99%	98%	100%	-	98%	99%	97%	100%
TTSL CDMA	98%	96%	98%	97%	99%	97%	-	97	96%	97%
TTSL GSM	99%	99%	97%	98%	98%	99%	97	-	100%	99%
VODAFONE	98%	96%	98%	98%	100%	99%	97%	99%	-	100%
MTS	99%	97%	99%	98%	100%	100%	100%	100%	100%	-

5. DRIVE TEST: SIGNIFICANCE AND METHODOLOGY

Drive test, as the name suggests, is conducted to measure the outdoor coverage in a moving vehicle in a specified network coverage area.

The main purpose of the drive test is to check the health of the mobile network of various operators in the area in terms of coverage (signal strength), voice quality, call drop rate, call set up success rate etc.

To assess the indoor coverage, the test is also conducted at two static indoor locations in each SSA, such as Malls, office buildings, shopping complexes, government buildings etc.

There are two types of drive test as mentioned below.

- Operator Assisted Drive Test
- Independent Drive Test

The main difference between the two is that in the operator assisted, operators participate in the drive test along with their hardware, software, phones etc. while in the independent drive test PhiStream conducts the drive test on solitary basis and uses its own hardware. Operators generally do not have any knowledge of the independent drive test being conducted.

5.1. OPERATOR ASSISTED DRIVE TEST

Rajasthan circle consist of total 24 SSA's and each SSA needs to be audit in the span of 12 months.

The methodology adopted for the drive test:

- 3 consecutive days drive test in each SSA. SSA would be defined as per DOT guidelines and month wise SSA list is finalized by regional TRAI office.
- On an average, a minimum of 80 kilometres are covered each day
- Route map was designed in such a way that all the major roads, highways and all the important towns and villages were covered as part of audit.
- Special emphasis was given to those areas where the number of complaints received were on the higher side, if provided by TRAI.
- The route is defined in a way that we cover maximum area in the SSA and try to cover maximum villages and cities within the SSA. The route is designed such that there is no overlap of roads and we can start from the point from where we had left last day (if possible).
- The route was classified as – Within City, Major Roads, Highways, Shopping complex/ Mall and Office Complex/ Government Building
- There were no fixed calls which we need to do for within city, major roads and highways, but a minimum of 30 calls in each route, i.e., within city, major roads and highways on each day. For indoors, 20 calls each for shopping and office complex each day preferably in relatively bigger city.
- The drive test covered selected cities and adjoining towns/rural areas where the service provider has commenced service, including congested areas and indoor sites.
- The drive test of each mobile network was conducted between 10 am and 8 pm on weekdays.
- The Vehicle used in the drive tests was equipped with the test tool that automatically generates calls on the mobile telephone networks.
- The speed of the vehicle was kept at around 30 km/hr.
- The holding period of each test call was 120 seconds.
- A test call was generated 10 seconds after the previous test call is completed.

- Height of the antenna was kept uniform in case of all service providers.

5.2. INDEPENDENT DRIVE TEST

The number of independent drive tests to be conducted and their locations are decided basis TRAI recommendation.

- A minimum of 80 kilometres was traversed during the independent drive test in a SSA. The SSA would be defined as per BSNL and SSA list will be finalized by regional TRAI office.
- Route map was designed in such a way that all the major roads, highways and all the important towns and villages were covered as part of audit.
- Special emphasis was given to those areas where the number of complaints received were on the higher side, if provided by TRAI.
- The route is defined in a way that we cover maximum area in the SSA and try to cover maximum villages and cities within the SSA. The route is designed such that there is no overlap of roads (if possible).
- The route was classified as – Within city, Major Roads, Highways, Shopping complex / Mall and Office Complex/ Government Building
- There were no fixed calls which we need to do for within city, major roads and highways, but a minimum of 30 calls in each route, i.e., within city, major roads and highways on each day. For indoors, 20 calls each for shopping and office complex each day preferably in relatively bigger city.
- The drive test covered selected cities and adjoining towns/rural areas where the service provider has commenced service, including congested areas and indoor sites.
- The drive test of each mobile network was conducted between 10 am and 8 pm on weekdays.
- The Vehicle used in the drive tests was equipped with the test tool that automatically generates calls on the mobile telephone networks.
- The speed of the vehicle was kept at around 30 km/hr.
- The holding period of each test call was 120 seconds.
- A test call was generated 10 seconds after the previous test call is completed.
- Height of the antenna was kept uniform in case of all service providers.

5.3. PARAMETERS EVALUATED DURING DRIVE TEST

The parameters which were captured during the drive test include. Below are the parameters which are captured for the GSM and CDMA operators.

- Coverage-Signal strength (GSM)
 - Total calls made (A)
 - Number of calls with signal strength between 0 to -75 dBm
 - Number of calls with signal strength between 0 to -85 dBm
 - Number of calls with signal strength between 0 to -95 dBm
- Coverage-Signal strength (CDMA)
 - Total Ec/Io BINS (A)
 - Total Ec/Io BINS with less than -15 (B)
 - Low Interference = $[1 - (B/A)] \times 100$
- Voice quality (GSM)
 - Total RxQual Samples– A

- RxQual samples with 0-5 value – B
 - %age samples with good voice quality = $B/A \times 100$
- Voice quality (CDMA)
 - Total FER BINs (forward FER) – A
 - FER BINs with 0-2 value (forward FER) – B
 - FER BINs with 0-4 value (forward FER) – C
 - %age samples with FER bins having 0-2 value (forward FER) = $B/A \times 100$
 - %age samples with FER bins having 0-4 value (forward FER) = $C/A \times 100$
 - No. of FER samples with value > 4 = [A-C]
- Call setup success rate
 - Total number of call attempts – A
 - Total Calls successfully established – B
 - Call success rate (%age) = $(B/A) \times 100$
- Blocked calls
 - 100% - Call Set up Rate
- Call drop rate
 - Total Calls successfully established – A
 - Total calls dropped after being established – B
 - Call Drop Rate (%age) = $(B/A) \times 100$

6. EXECUTIVE SUMMARY

The objective assessment of Quality of Service (QoS) carried out gives an insight into the overall performance of various operators in the Delhi Circle, with a parameter wise performance evaluation as compared to TRAI benchmark.

6.1. OPERATORS COVERED

Name of Operator	Number of Subscriber (Up to December 31, 2015)
BSNL	3504482
Airtel	22825185
Aircel	6461780
Idea	10376974
Reliance CDMA	1015620
Reliance GSM	5849444
Tata GSM	759404
Tata CDMA	907228
Systema Shyam Teleservices Ltd	2172906
Vodafone	11707557

TSP	No. of cells	BTS	BSC	MSC+GMSC	Node B	RNC
Aircel	NA	NA	NA	NA	NA	NA
Airtel	25086	8363	81	44	4602	16
Idea	20888	6819	53	12+1	DNA	DNA
TTSL GSM	4175	1388	12	2	NA	NA
TTSL CDMA	2216	690	6	3+2	NA	NA
RCOM GSM	6169	2059	15	3+1	NA	NA
RCOM CDMA	2791	931	6	4+2	NA	NA
Vodafone	22545	7358	107	12	455	8
BSNL	NA	NA	NA	NA	1289	16

Note: Node B & RNC is marked as Not Applicable (N.A.) for the services providers who do not have 3G services licence in the circle.

DNA: Data not available

6.2. AUDIT SCHEDULE

Operator	(3 Days Live audit) October 2015	October 2015	November 2015	December 2015
Airtel	29 th Oct 2015	10 th Nov 2015	11 th Dec 2015	11 th Jan 2016
Vodafone	26 th Oct 2015	9 th Nov 2015	10 th Dec 2015	8 th Jan 2016
Idea	28 th Oct 2015	17 th Nov 2015	14 th Dec 2015	14 th Jan 2016
Reliance	23 rd Oct 2015	16 th Nov 2015	15 th Dec 2016	13 th Jan 2016
BSNL	24 th Oct 2015	22 nd Nov 2015	16 th Dec 2016	12 th Jan 2016
Aircel	31 st Oct 2015	5 th Nov 2015	8 th Dec 2015	6 th Jan 2016
Tata Teleservices	31 st Oct 2015	7 th Nov 2015	7 th Dec 2015	5 th Jan 2016
MTS	27 th Oct 2015	6 th Nov 2015	9 th Dec 2015	7 th Jan 2016

Note: Audit schedule mentioned above is for the PMR audit for the last month. 3 day live monitoring for the current month was carried along with the PMR audit.

Colour codes to read the report:

	Not meeting the benchmark
NA	Not applicable
DNA	Data not available (at TSP premises)

6.3. 2G VOICE PMR DATA: OCTOBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	5.53%	0.64%	97.40%	0.35%	0.88%	0.74%	2.95%	96.84%
Airtel	0.11%	0.16%	97.92%	0.62%	1.16%	0.65%	0.65%	99.18%
BSNL	1.45%	1.81%	95.47%	0.43%	1.46%	1.50%	1.83%	98.65%
Idea	0.07%	0.07%	99.30%	0.33%	0.39%	0.85%	2.37%	96.34%
MTS	0.09%	0.00%	99.10%	NA	0.10%	0.37%	0.40%	99.21%
RCOM CDMA	0.10%	0.43%	97.97%	NA	0.88%	0.15%	1.15%	98.61%
RCOM GSM	0.13%	0.87%	98.07%	0.09%	0.15%	0.12%	0.69%	99.37%
TATA CDMA	0.18%	0.00%	98.74%	NA	0.43%	0.39%	5.67%	98.90%
TATA GSM	0.17%	0.01%	98.06%	0.09%	0.08%	0.68%	3.98%	98.73%
Vodafone	0.09%	0.01%	99.64%	0.26%	0.36%	0.74%	2.48%	96.80%

- Aircel has parameter value of **5.53%** and failed to meet the benchmark for No. of BTSs having accumulated downtime of >24 hours in a month as it is pre-defined at $\leq 2\%$.
- TATA CDMA has a parameter value of **5.67%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$.
- TATA GSM has a parameter value of **3.98%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

6.4. 2G VOICE PMR DATA: NOVEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	$\leq 2\%$	$\leq 2\%$	$\geq 95\%$	$\leq 1\%$	$\leq 2\%$	$\leq 2\%$	$\leq 3\%$	$\geq 95\%$
Aircel	0.07%	0.08%	97.58%	0.24%	0.64%	0.61%	2.37%	96.91%
Airtel	0.08%	0.10%	97.59%	0.50%	1.41%	0.65%	0.67%	99.17%
BSNL	1.48%	1.66%	98.50%	0.31%	1.07%	1.39%	1.86%	98.53%
Idea	0.03%	0.04%	99.39%	0.22%	0.34%	0.67%	1.93%	96.63%
MTS	0.05%	0.00%	99.17%	NA	0.08%	0.36%	0.50%	99.22%
RCOM CDMA	0.01%	0.00%	98.04%	NA	0.78%	0.12%	0.72%	96.37%
RCOM GSM	0.03%	0.87%	99.20%	0.07%	0.12%	0.10%	0.89%	99.42%
TATA CDMA	0.10%	0.00%	98.20%	NA	1.01%	0.31%	3.23%	98.92%
TATA GSM	0.11%	0.00%	98.45%	0.05%	0.09%	0.59%	3.37%	98.81%
Vodafone	0.04%	0.15%	99.63%	0.15%	0.37%	0.66%	2.34%	96.72%

- TATA CDMA has a parameter value of **3.23%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$.
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

6.5. 2G VOICE PMR DATA: DECEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	0.07%	0.08%	97.56%	0.19%	0.43%	0.63%	2.80%	96.92%
Airtel	0.10%	0.14%	98.05%	0.29%	1.01%	0.63%	0.73%	99.24%
BSNL	1.44%	1.71%	98.52%	0.47%	1.12%	1.47%	1.75%	98.52%
Idea	0.03%	0.00%	99.57%	0.15%	0.17%	0.61%	1.92%	96.70%
MTS	0.02%	0.00%	99.27%	NA	0.03%	0.35%	0.59%	99.23%
RCOM CDMA	0.02%	0.00%	97.40%	NA	1.22%	0.11%	0.79%	98.83%
RCOM GSM	0.03%	0.05%	99.17%	0.05%	0.23%	0.10%	0.63%	99.38%
TATA CDMA	0.05%	0.00%	98.78%	NA	0.48%	0.30%	3.07%	98.94%
TATA GSM	0.08%	0.14%	98.50%	0.02%	0.04%	0.50%	2.77%	98.87%
Vodafone	0.06%	0.34%	99.69%	0.12%	0.31%	0.66%	2.44%	96.77%

- TATA CDMA has a parameter value of **3.07%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%

6.6. 2G VOICE PMR DATA: CONSOLIDATED

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	1.89%	0.27%	97.51%	0.26%	0.65%	0.66%	2.71%	96.89%
Airtel	0.10%	0.13%	97.85%	0.47%	1.19%	0.64%	0.68%	99.20%
BSNL	1.46%	1.73%	97.50%	0.40%	1.22%	1.45%	1.81%	98.57%
Idea	0.04%	0.04%	99.42%	0.23%	0.30%	0.71%	2.07%	96.56%
MTS	0.05%	0.00%	99.18%	NA	0.07%	0.36%	0.50%	99.22%
RCOM CDMA	0.04%	0.14%	97.80%	NA	0.96%	0.13%	0.89%	97.94%
RCOM GSM	0.06%	0.60%	98.81%	0.07%	0.17%	0.11%	0.74%	99.39%
TATA CDMA	0.11%	0.00%	98.57%	NA	0.64%	0.33%	3.99%	98.92%
TATA GSM	0.12%	0.05%	98.34%	0.05%	0.07%	0.59%	3.37%	98.80%
Vodafone	0.06%	0.17%	99.65%	0.18%	0.35%	0.69%	2.42%	96.76%

- TATA CDMA has a parameter value of **3.99%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.

6.7. 2G VOICE 3 DAYS LIVE DATA

A three day live measurement was conducted to measure the QoS provided by the operators. It was seen from the live data collected, that the performance of the operators across all parameters more or less corroborated with the audit data collected.

6.8. 2G VOICE 3 DAYS LIVE DATA: OCTOBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	0.35%	0.00%	97.58%	0.20%	0.47%	0.70%	2.84%	96.97%
Airtel	0.14%	0.00%	97.85%	0.62%	1.22%	0.69%	0.57%	99.20%
BSNL	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
Idea	0.14%	0.00%	99.24%	0.56%	0.47%	0.85%	2.22%	96.48%
MTS	0.05%	0.00%	99.16%	NA	0.09%	0.35%	0.35%	99.22%
RCOM CDMA	0.07%	0.00%	97.61%	NA	0.85%	0.15%	0.97%	98.39%
RCOM GSM	0.09%	0.00%	98.92%	0.06%	0.11%	0.11%	0.54%	99.11%
TATA CDMA	0.02%	0.00%	98.80%	NA	0.45%	0.38%	5.66%	98.92%
TATA GSM	0.03%	0.00%	98.18%	0.19%	0.08%	0.64%	3.54%	98.77%
Vodafone	0.02%	0.01%	99.66%	0.56%	0.32%	0.65%	2.35%	96.78%

- TATA CDMA has a parameter value of **5.66%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.
- TATA GSM has a parameter value of **3.54%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%

6.9. 2G VOICE 3 DAYS LIVE DATA: NOVEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	0.07%	0.00%	97.38%	0.09%	0.42%	0.74%	2.51%	96.88%
Airtel	0.11%	0.00%	97.96%	0.58%	1.12%	0.63%	0.66%	99.18%
BSNL	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
Idea	0.02%	0.00%	99.52%	0.43%	0.21%	0.68%	1.81%	96.60%
MTS	0.05%	0.00%	99.07%	NA	0.13%	0.37%	0.30%	99.22%
RCOM CDMA	0.01%	0.00%	97.67%	NA	1.01%	0.13%	0.64%	98.40%
RCOM GSM	0.02%	0.00%	99.67%	0.05%	0.10%	0.10%	0.52%	99.23%
TATA CDMA	0.09%	0.00%	98.75%	NA	0.49%	0.34%	3.35%	98.89%
TATA GSM	0.16%	0.00%	98.35%	0.05%	0.06%	0.70%	3.94%	98.77%
Vodafone	0.01%	0.00%	99.73%	0.09%	0.27%	0.69%	2.57%	96.80%

- TATA CDMA has a parameter value of **3.35%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.
- TATA GSM has a parameter value of **3.94%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.
- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

6.10. 2G VOICE 3 DAYS LIVE DATA: DECEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	0.07%	0.00%	97.60%	0.21%	0.38%	0.62%	2.53%	96.90%
Airtel	0.10%	0.00%	97.89%	0.33%	1.17%	0.64%	0.70%	99.17%
BSNL	1.46%	0.17%	98.47%	0.29%	1.01%	1.42%	2.03%	98.67%
Idea	0.04%	0.00%	99.53%	0.12%	0.22%	0.60%	1.80%	96.72%
MTS	0.03%	0.00%	99.12%	NA	0.11%	0.36%	0.31%	99.24%
RCOM CDMA	0.01%	0.00%	97.68%	NA	1.33%	0.12%	0.66%	96.65%
RCOM GSM	0.02%	0.00%	99.43%	0.04%	0.28%	0.10%	0.56%	99.22%
TATA CDMA	0.04%	0.00%	98.57%	NA	0.68%	0.35%	3.10%	98.91%
TATA GSM	0.12%	0.00%	98.49%	0.04%	0.03%	0.53%	2.83%	98.82%
Vodafone	0.01%	0.00%	99.63%	0.15%	0.37%	0.66%	1.96%	96.69%

- TATA CDMA has a parameter value of **3.10%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%

6.11. 3 DAYS LIVE DATA: CONSOLIDATED

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area in a month	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	0.16%	0.00%	97.52%	0.17%	0.42%	0.69%	2.63%	96.92%
Airtel	0.12%	0.00%	97.90%	0.51%	1.17%	0.65%	0.64%	99.18%
BSNL	1.46%	0.06%	98.47%	0.29%	1.01%	1.42%	2.03%	98.67%
Idea	0.07%	0.00%	99.43%	0.37%	0.30%	0.71%	1.94%	96.60%
MTS	0.04%	0.00%	99.12%	NA	0.11%	0.36%	0.32%	99.23%
RCOM CDMA	0.03%	0.00%	97.65%	NA	1.06%	0.13%	0.76%	97.81%
RCOM GSM	0.04%	0.00%	99.34%	0.05%	0.16%	0.10%	0.54%	99.19%
TATA CDMA	0.05%	0.00%	98.71%	NA	0.54%	0.36%	4.04%	98.91%
TATA GSM	0.10%	0.00%	98.34%	0.09%	0.06%	0.62%	3.44%	98.79%
Vodafone	0.01%	0.00%	99.67%	0.27%	0.32%	0.67%	2.29%	96.76%

- TATA CDMA has a parameter value of **4.04%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%
- TATA GSM has a parameter value of **3.44%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%

6.12. 3G VOICE PMR: CONSOLIDATED

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.13%	0.42%	98.89%	0.36%	0.50%	0.58%	1.54%	98.89%
BSNL	1.54%	0.96%	95.83%	0.98%	1.71%	1.93%	2.76%	96.36%
Idea	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.05%	0.11%	99.85%	0.05%	0.02%	0.34%	3.30%	98.97%

- Vodafone has a parameter value of **3.30%** and failed to meet the benchmark for Worst affected cells having more than 3% Circuit Switched Voice Drop Rate as it is pre-defined at ≤ 3%.
- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

6.13. 3G VOICE PMR: OCTOBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.13%	0.42%	98.89%	0.36%	0.50%	0.58%	1.54%	98.89%
BSNL	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
Idea	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA

- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

6.14. 3G VOICE PMR: NOVEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.16%	0.30%	99.04%	0.25%	0.45%	0.52%	1.36%	98.89%
BSNL	1.54%	1.78%	95.42%	0.97%	1.94%	1.91%	2.79%	96.00%
Idea	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.00%	0.00%	99.81%	0.02%	0.01%	0.36%	4.13%	98.97%

- Vodafone has a parameter value of **4.13%** and failed to meet the benchmark for Worst affected cells having more than 3% Circuit Switched Voice Drop Rate as it is pre-defined at ≤ 3%.
- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

6.15. 3G VOICE PMR: DECEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.24%	0.33%	99.15%	0.21%	0.37%	0.52%	1.24%	98.90%
BSNL	1.54%	1.86%	96.23%	0.98%	1.47%	1.95%	2.73%	96.71%
Idea	NA	NA	NA	NA	NA	NA	NA	NA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.09%	0.22%	99.88%	0.07%	0.03%	0.31%	2.46%	98.96%

- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

6.16. 3G VOICE 3 DAYS LIVE DATA: CONSOLIDATED

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.19%	0.00%	99.17%	0.13%	0.24%	0.71%	1.44%	98.89%
BSNL	1.51%	0.10%	96.07%	0.99%	1.05%	1.95%	2.71%	96.00%
Idea	0.27%	0.00%	99.11%	0.18%	0.33%	0.57%	1.48%	98.90%
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.05%	0.00%	99.93%	0.07%	0.01%	0.34%	4.70%	98.94%

6.17. 3G VOICE 3 DAYS LIVE DATA: OCTOBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.27%	0.00%	99.11%	0.18%	0.35%	0.57%	1.48%	98.90%
BSNL	NA	NA	NA	NA	NA	NA	NA	NA
Idea	0.27%	0.00%	99.11%	0.18%	0.33%	0.57%	1.48%	98.90%
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA

6.18. 3G VOICE 3 DAYS LIVE DATA: NOVEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.16%	0.30%	99.04%	0.25%	0.45%	0.52%	1.36%	98.89%
BSNL	NA	NA	NA	NA	NA	NA	NA	NA
Idea	NA	NA	NA	NA	NA	NA	NA	NA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA

- **For each instance of “DNA (Data Not Available)”, please refer the respective hard copy of audit report(s).

6.19. 3G VOICE 3 DAYS LIVE DATA: DECEMBER

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	NA	NA	NA	NA	NA	NA	NA	NA
BSNL	1.51%	0.10%	96.07%	0.99%	1.05%	1.95%	2.71%	96.00%
Idea	NA	NA	NA	NA	NA	NA	NA	NA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.05%	0.00%	99.93%	0.07%	0.01%	0.34%	4.70%	98.94%

7. CUSTOMER SERVICE DELIVERY

7.1. Billing and Customer Care

Name of Service Provider	Metering and Billing credibility		Billing Complaints			Termination & Closures	Time taken for refund of deposits after closures	Customer Care	
	Postpaid Subscribers	Prepaid Subscribers	%age complaints resolved within 4 weeks	%age complaints resolved within 6 weeks	%age of credit/weiver is received within one week	% of Termination / Closure of service within 7 days (100 %)	Cleared over a period of <60 days	%age of calls answered by the IVR	%age of call answered by the operators (voice to voice) within 90 seconds
Benchmark	≤ 0.1%	≤ 0.1%	≥ 98%	=100%	= 100%	= 100%	= 100%	= 95%	= 95%
Aircel	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	96.19%	94.30%
Airtel	0.02%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.18%
BSNL	0.04%	0.04%	100.00%	100.00%	100.00%	100.00%	100.00%	95.58%	96.80%
Idea	0.06%	0.18%	100.00%	100.00%	100.00%	100.00%	100.00%	99.23%	96.49%
MTS	0.04%	0.02%	100.00%	100.00%	100.00%	100.00%	100.00%	99.94%	95.34%
RCOM CDMA	0.09%	0.09%	100.00%	100.00%	100.00%	100.00%	100.00%	98.38%	91.47%
RCOM GSM	0.09%	0.09%	100.00%	100.00%	100.00%	100.00%	100.00%	98.34%	84.12%
TTSL CDMA	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.53%	99.67%
TTSL GSM	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.64%	99.56%
Vodafone	0.17%	0.12%	100.00%	100.00%	100.00%	100.00%	60.57%	100.00%	98.66%

- Aircel has a parameter value of **94.30%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%
- Idea has a parameter value of **0.18%** and failed to meet the benchmark for Metering and Billing credibility (Pre-paid) as it is pre-defined at ≤ 0.1%
- RCOM CDMA has a parameter value of **91.47%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%.
- RCOM GSM has a parameter value of **84.12%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%.
- Vodafone has a parameter value of **0.17%** and failed to meet the benchmark for Metering and Billing credibility (Post-paid) as it is pre-defined at ≤ 0.1%.
- Vodafone has a parameter value of **0.12%** and failed to meet the benchmark for Metering and Billing credibility (Prepaid) as it is pre-defined at ≤ 0.1%.
- Vodafone has a parameter value of **60.57%** and failed to meet the benchmark for Time taken for refund of deposits after closures (Cleared over a period of <60 days) as it is pre-defined at =100%.

Name of Service Provider	Customer Care & Grievances Redressal	
	% of complaints addressed at call center level.	% of complaints addressed by Appellate authority.
Benchmark		
Aircel	100%	100.00%
Airtel	94.86%	100.00%
BSNL	5.07%	NIL
Idea	90.58%	100.00%
MTS	100.00%	100.00%
RCOM CDMA	100.00%	100.00%
RCOM GSM	100.00%	100.00%
TTSL CDMA	99.73%	100.00%
TTSL GSM	99.08%	100.00%
Vodafone	27.21%	100.00%

7.2. Live Calling Data: Consolidated

Name of Service Provider	Metering and Billing (Service Request)				Response time to customer for Assistanse	
	Total Calls Attempted	No. of Subscribers reached	Compalints/ Request attended to satisfaction	% of Compalints/ Request attended to satisfaction	Accessibility of call centre / Customer care	%age of call answered by the operators (voice to voice) within 90 seconds
Benchmark					≥ 95%	≥ 95%
Aircel	203	203	198	97.54%	100.00%	100.00%
Airtel	159	103	101	98.06%	100.00%	100.00%
BSNL	160	150	148	98.67%	100.00%	83.00%
Idea	200	151	149	98.68%	100.00%	100.00%
MTS	141	125	90	72.00%	100.00%	100.00%
RCOM CDMA	203	49	49	100	100.00%	99.00%
RCOM GSM	200	93	93	100.00%	98%	97.00%
TTSL CDMA	NA	NA	NA	NA	97.00%	97.00%
TTSL GSM	NA	NA	NA	NA	97.00%	97.00%
Vodafone	208	208	208	100.00%	100.00%	100.00%

- BSNL has a parameter value of **83.00%** failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%

7.3. 3 Days Live Call Centre Data

	Response time to customer assistance							
	% age of Accessibility of Call centre	% age calls answered by the operator within 90 seconds	% age of Accessibility of Call centre	% age calls answered by the operator within 90 seconds	% age of Accessibility of Call centre	% age calls answered by the operator within 90 seconds	% age of Accessibility of Call centre	% age calls answered by the operator within 90 seconds
	Day 1		Day 2		Day 3		Average	
TSP Name	>=95%	>=95%	>=95%	>=95%	>=95%	>=95%	>=95%	>=95%
MTS	99.93%	95.25%	99.96%	95.16%	99.97%	95.96%	99.95%	95.46%
BSNL	95.96%	97.32%	95.46%	97.43%	95.60%	100.00%	95.67%	98.25%
Vodafone	100.00%	93.76%	100.00%	93.30%	100.00%	95.10%	100.00%	94.05%
RCOM CDMA	96.92%	99.01%	96.67%	95.75%	97.90%	96.76%	96.80%	97.18%
RCOM GSM	97.21%	99.23%	97.47%	95.08%	97.90%	98.01%	97.53%	97.44%
Idea	93.51%	99.83%	97.94%	99.83%	99.17%	99.85%	96.88%	99.84%
Airtel	100.00%	91.09%	100.00%	95.98%	100.00%	90.33%	100.00%	92.46%
TTSL CDMA	98.55%	99.87%	99.37%	99.68%	98.83%	99.32%	98.92%	99.62%
TTSL GSM	99.68%	95.55%	99.31%	99.22%	98.29%	93.98%	99.09%	96.25%
Aircel	98.70%	95.24%	98.70%	97.73%	98.40%	97.76%	98.59%	96.91%

- Vodafone has a parameter value of **94.05%** failed to meet the benchmark for % age calls answered by the operator within 90 seconds as it is pre-defined at $\geq 95\%$.
- Vodafone has a parameter value of **92.46%** failed to meet the benchmark for % age calls answered by the operator within 90 seconds as it is pre-defined at $\geq 95\%$.

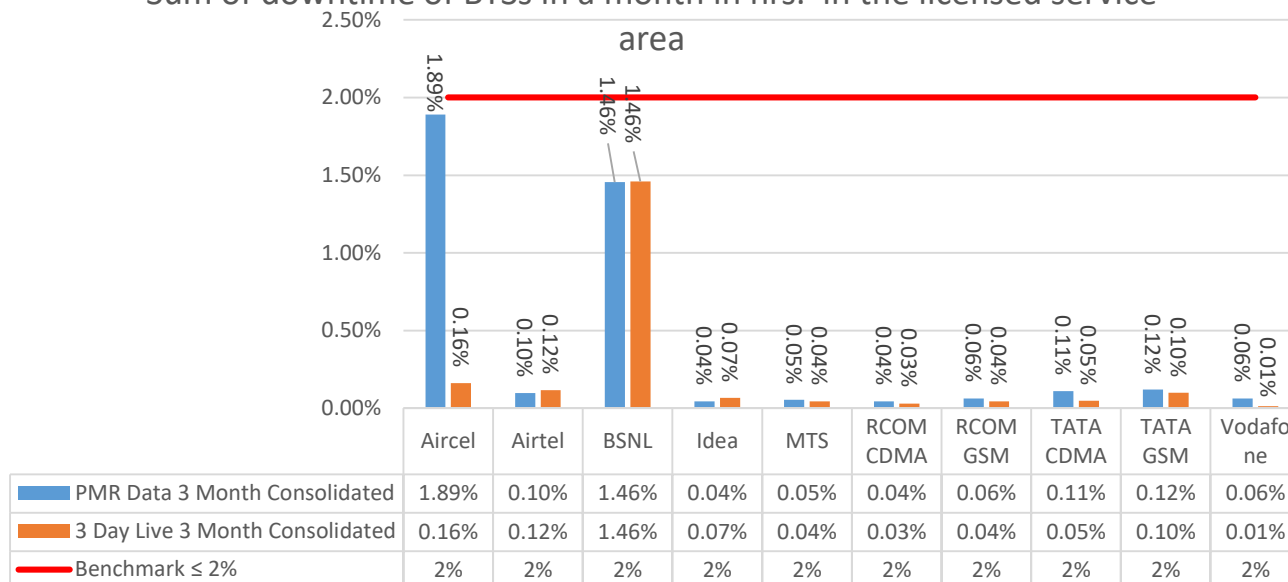
8. NETWORK PARAMETER: DESCRIPTION AND DETAILED FINDINGS

8.1. BTS ACCUMULATED DOWNTIME

- Parameter Description:
 - The parameter of network availability would be measured from following sub-parameters:
 - BTSs Accumulated Downtime (not available for service)
 - Worst effected BTSs due to downtime
- Definition: BTSs (Base Transceiver Station) accumulated downtime (not available for service) shall basically measure the downtime of the BTSs, including its transmission links/circuits during the period of a month, but excludes all planned service downtime for any maintenance or software up gradation. For measuring the performance against the benchmark for this parameter the downtime of each BTS lasting more than 1 hour at a time in a day during the period of a month were considered.
- Computation Methodology:
 - $$\text{BTS accumulated downtime (not available for service)} = \frac{\text{Sum of downtime of BTSs in a month in hours i.e. total outage time of all BTSs in hours during a month}}{24 \times \text{Number of days in a month} \times \text{Number of BTSs in the network in licensed service area}} \times 100$$
- TRAI Benchmark: BTSs Accumulated downtime (not available for service) $\leq 2\%$
- Audit Procedure:
 - The fault alarm details at the OMC (MSC) for the network outages (due to own network elements and infrastructure service provider end outages) was audited.
 - All the BTS in service area were considered. Planned outages due to network up gradation, routine maintenance were not considered.
 - Any outage as a result of force majeure were not considered at the time of calculation.
 - Data is extracted from system log of the server of the operator. This data is in raw format which is further processed to arrive at the cumulative values.
 - List of operating sites with cell details and ids are taken from the operator.
 - When there is any outage a performance report gets generated in line with that cell resulting and master base of the Accumulated downtime and worst affected BTS due to downtime.

8.1.1. KEY FINDINGS: SUM OF DOWNTIME OF BTSS: CONSOLIDATED

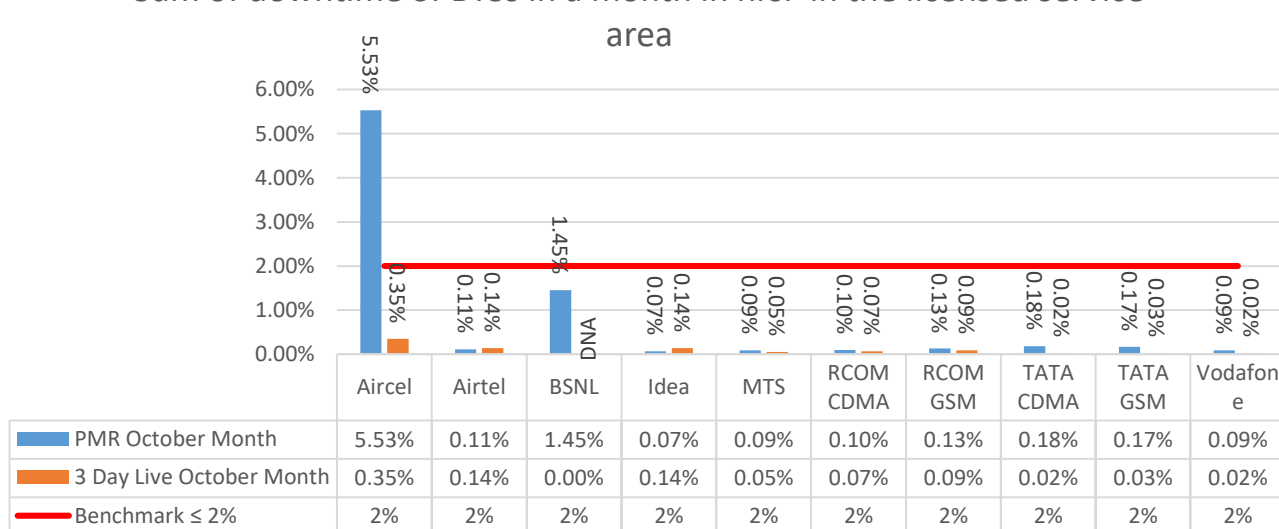
Sum of downtime of BTSS in a month in hrs. in the licensed service area



- It is clear from the analysis that all the operators are within benchmark.

8.1.2. KEY FINDINGS: SUM OF DOWNTIME OF BTSS: OCTOBER

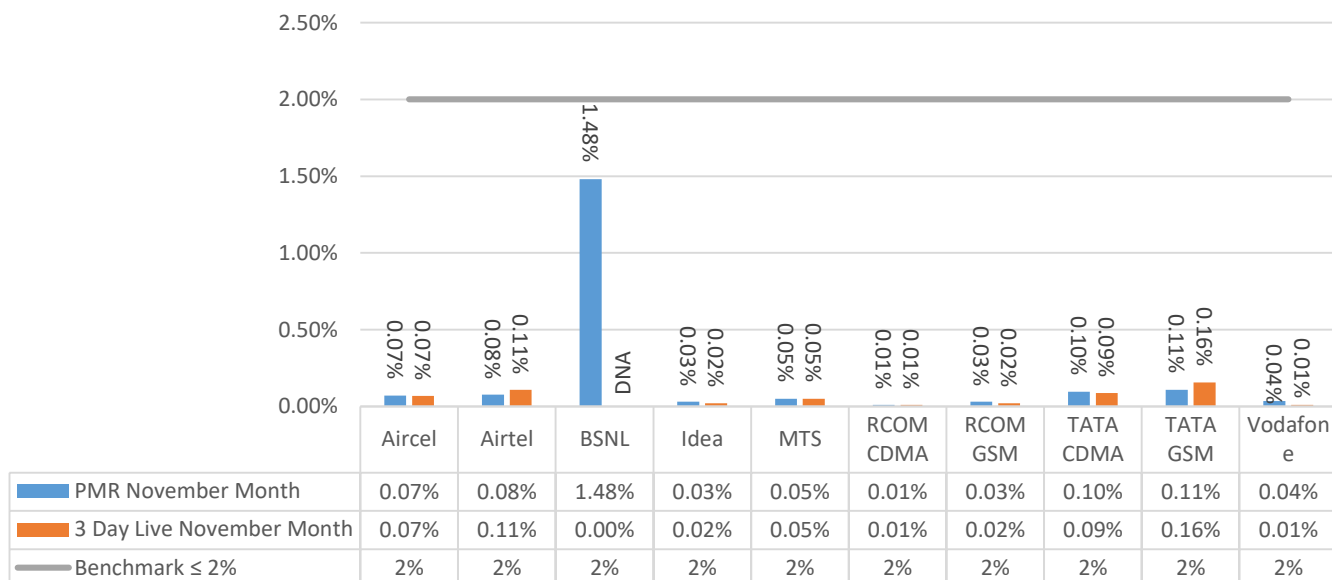
Sum of downtime of BTSS in a month in hrs. in the licensed service area



- Aircel has parameter value of **5.53%** and failed to meet the benchmark for No. of BTSSs having accumulated downtime of >24 hours in a month as it is pre-defined at ≤ 2%

8.1.3. KEY FINDINGS: SUM OF DOWNTIME OF BTSs: NOVEMBER

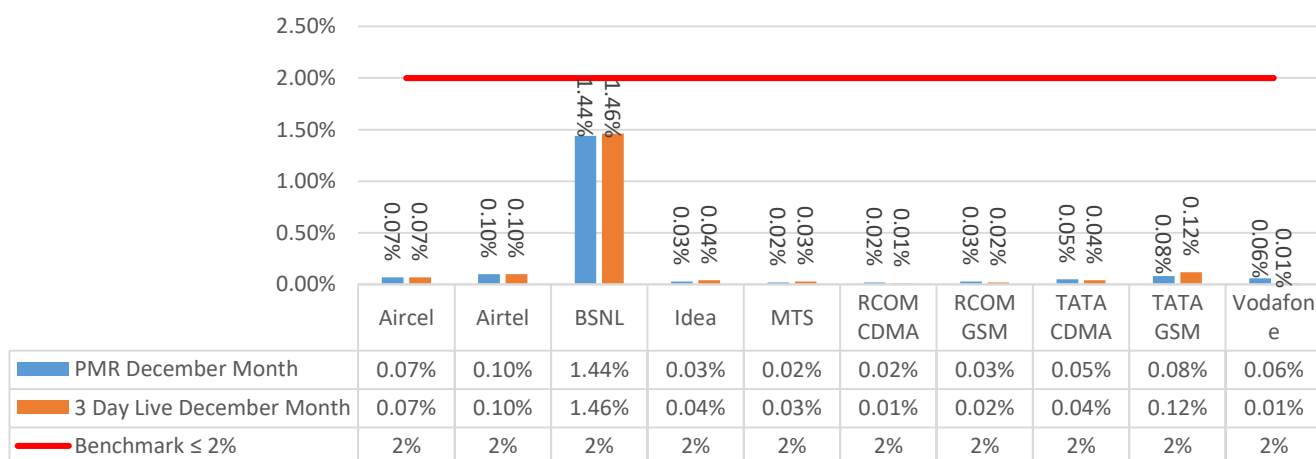
Sum of downtime of BTSs in a month in hrs. in the licensed service area



- It is clear from the analysis that all the operators are within benchmark.

8.1.4. KEY FINDINGS: SUM OF DOWNTIME OF BTSs: DECEMBER

Sum of downtime of BTSs in a month in hrs. in the licensed service area



- It is clear from the analysis that all the operators are within benchmark.

8.2. WORST AFFECTED BTS DUE TO DOWNTIME

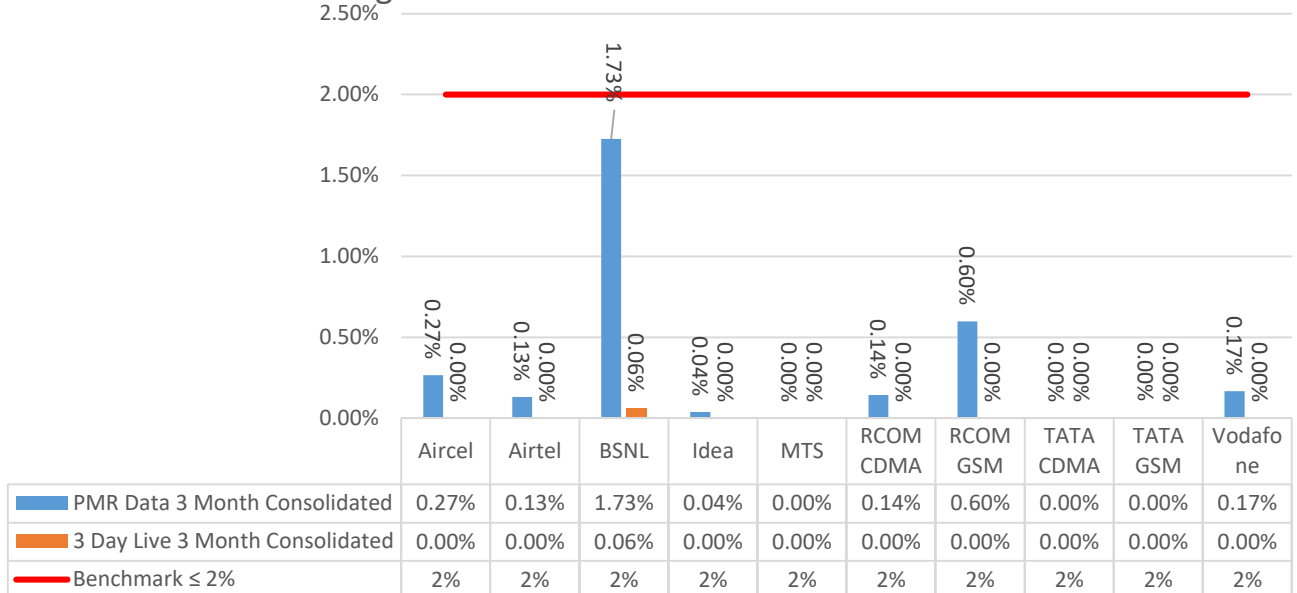
- Definition: Worst Affected BTS due to downtime shall basically measure percentage of BTS having downtime greater than 24 hours in a month. Planned outages were not considered as part while computing.

For measuring the parameter “Percentage of worst affected BTSs due to downtime” the downtime of each BTS lasting for more than 1 hour at a time in a day during the period of a month was considered.

- Computation Methodology: Worst affected BTSs due to downtime =
$$\frac{\text{Number of BTSs having accumulated downtime greater than 24 hours in a month}}{\text{Number of BTS in Licensed Service Area}} * 100$$
- TRAI Benchmark: Worst affected BTSs due to downtime $\leq 2\%$
- Audit Procedure:
 - The fault alarm details at the OMC (MSC) for the network outages (due to own network elements and infrastructure service provider end outages) was audited.
 - All the BTS in service area were considered. Planned outages due to network up gradation, routine maintenance were not considered.
 - Data is extracted from system log of the server of the operator. This data is in raw format which is further processed to arrive at the cumulative values.
 - Any outage as a result of force majeure was not considered at the time of calculation.
 - List of operating sites with cell details and ids are taken from the operator.
 - All the BTS having down time greater than 24 hours is assessed and values of BTS accumulated downtime is computed in accordance.

8.2.1. KEY FINDINGS: NO. OF BTSS HAVING ACCUMULATED DOWNTIME OF >24 HRS: CONSOLIDATED

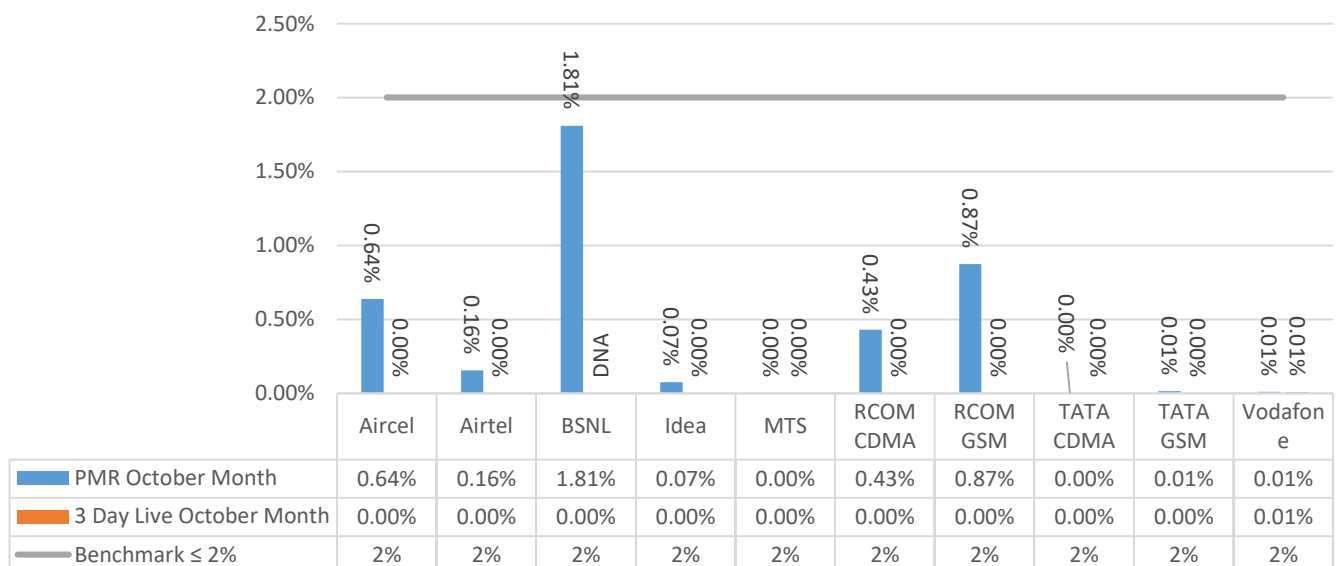
No. of BTSS having accumulated downtime of >24 hours in a month



- It is clear from the analysis that all the operators are within benchmark.

8.2.2. KEY FINDINGS: NO. OF BTSS HAVING ACCUMULATED DOWNTIME OF > 24 HRS: OCTOBER

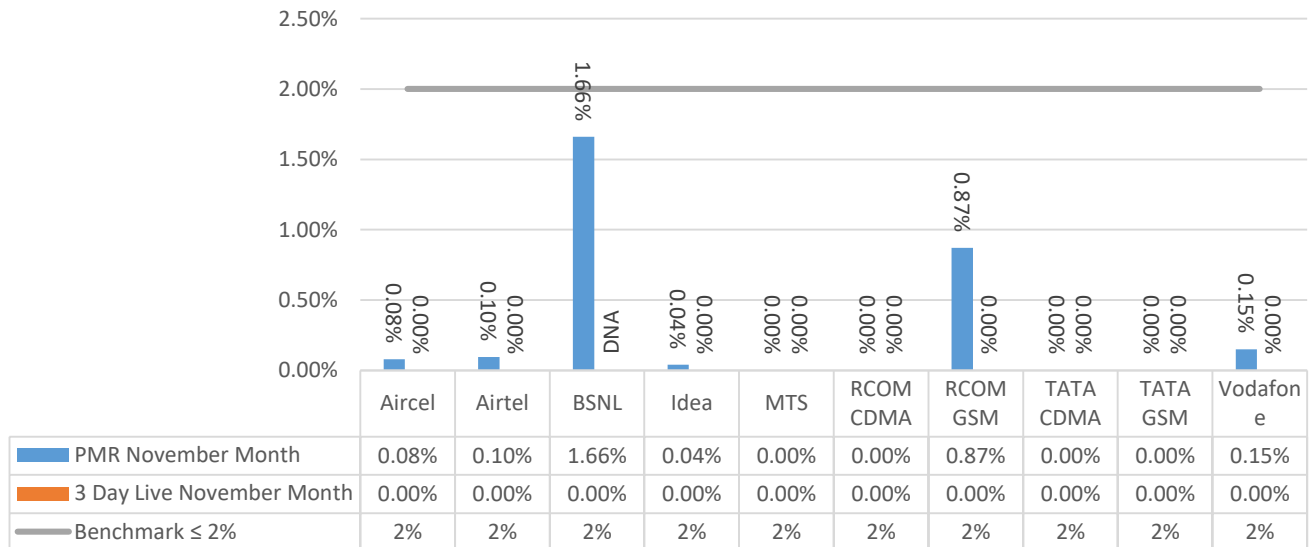
No. of BTSS having accumulated downtime of >24 hours in a month



- It is clear from the analysis that all the operators are within benchmark.

8.2.3. KEY FINDINGS: NO. OF BTSs HAVING ACCUMULATED DOWNTIME OF > 24 HRS: NOVEMBER

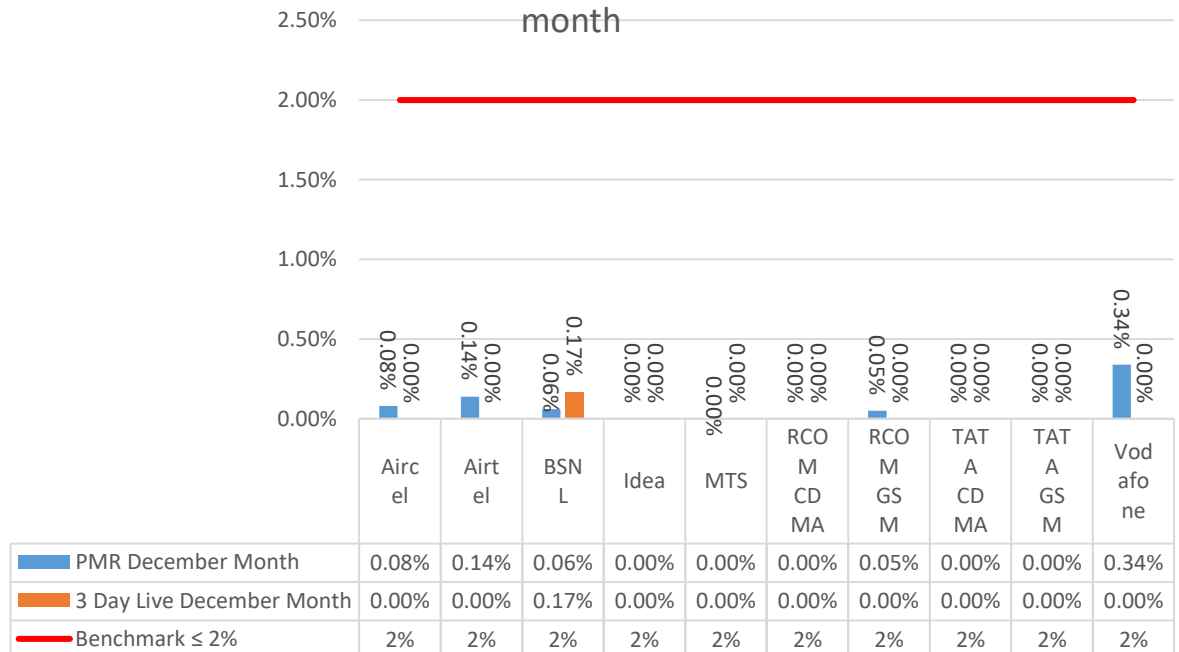
No. of BTSs having accumulated downtime of >24 hours in a month



- It is clear from the analysis that all the operators are within benchmark.

8.2.4. KEY FINDINGS: NO. OF BTSs HAVING ACCUMULATED DOWNTIME OF > 24 HRS: DECEMBER

No. of BTSs having accumulated downtime of >24 hours in a month



- It is clear from the analysis that all the operators are within benchmark.

8.3. CALL SETUP SUCCESS RATE

- Definition: The ratio of successful calls established to total calls is known as Call Set-Up Success Rate (CSSR).
- Computational Methodology: $\frac{\text{Calls Established}}{\text{Total call attempts}} * 100$

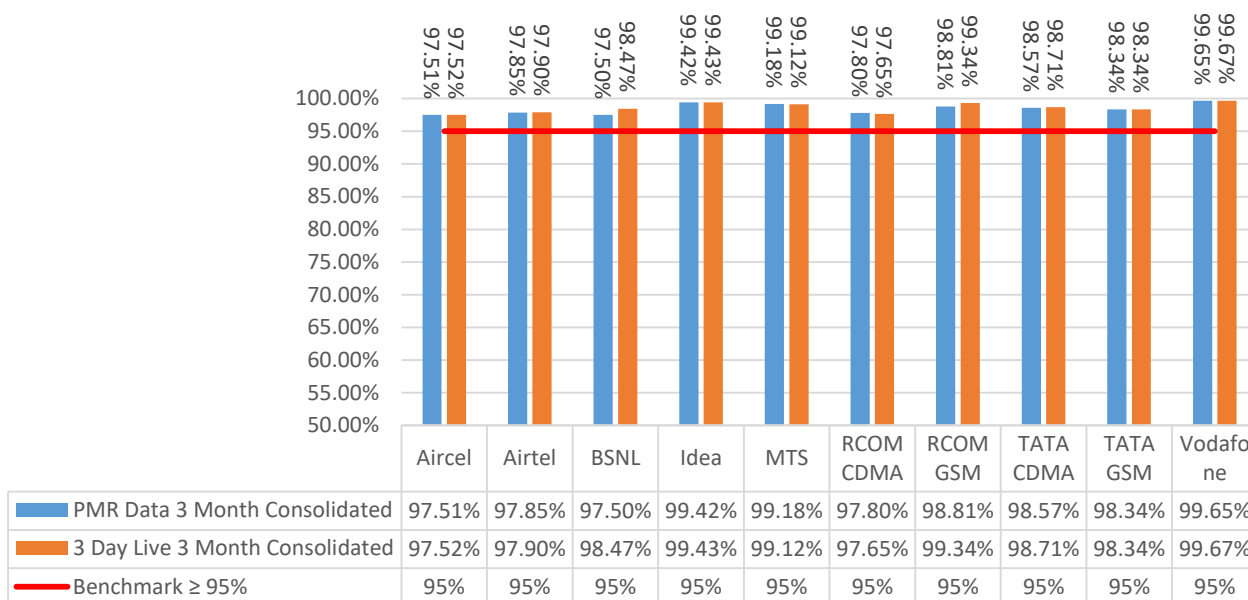
Calls established means the following events happened in call setup:

- Call attempt is made.
 - The TCH is allocated.
 - The call is routed to the outward path of the concerned MSC.
- TRAI Benchmark $\geq 95\%$
 - Audit Procedure:
 - The cell-wise data generated through counters/ MMC available in the switch for traffic measurements.
 - CSSR calculation should be measured using OMC generated data only.
 - Measurement should be only in Time Consistent Busy Hour (CBBH) period for all days of the week.
 - Counter data is extracted from the NOC of the operators.
 - Total calls established include all calls established excluding Signaling blocking, TCH Drop and TCH blocking.

The numerator and denominator values are derived from adding the counter values from the MSC.

8.3.1. KEY FINDINGS: CALL SETUP SUCCESS RATE: CONSOLIDATED

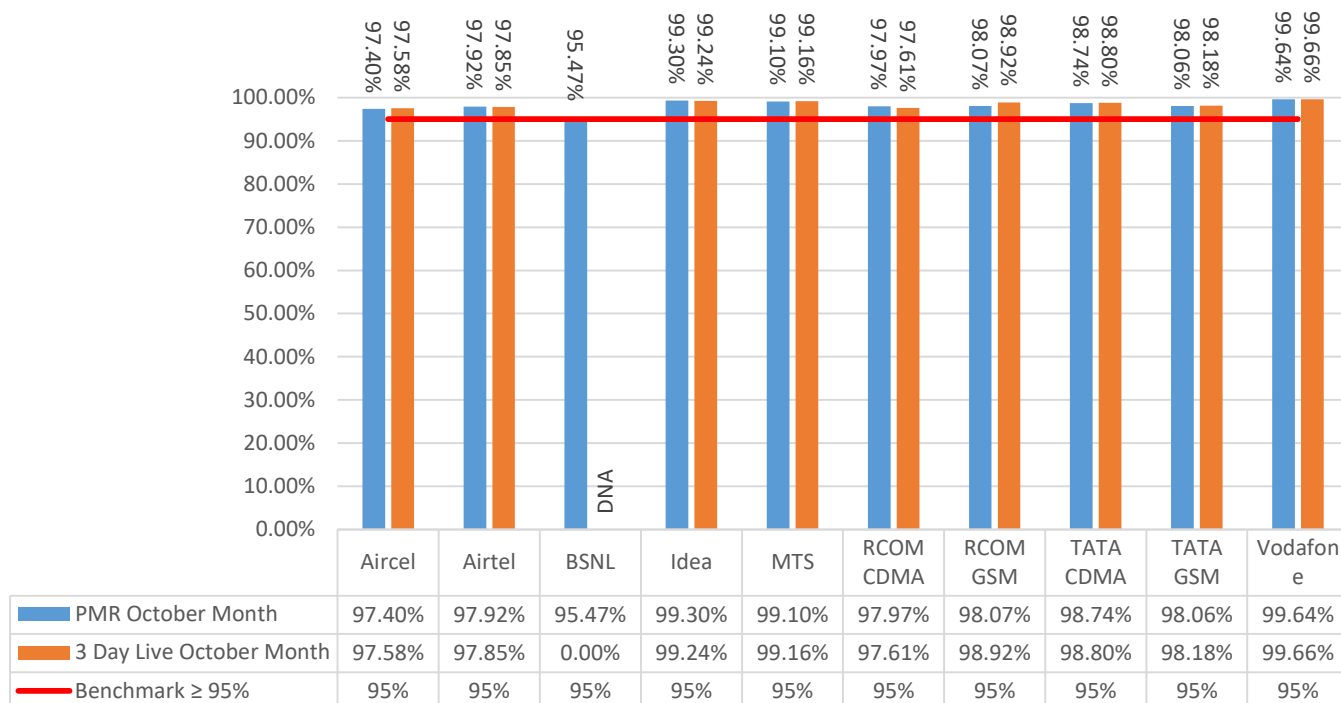
Call Set-up Success Rate (Within Licensee own network)



- It is clear from the analysis that all the operators are within benchmark.

8.3.2. KEY FINDINGS: CALL SETUP SUCCESS RATE: OCTOBER

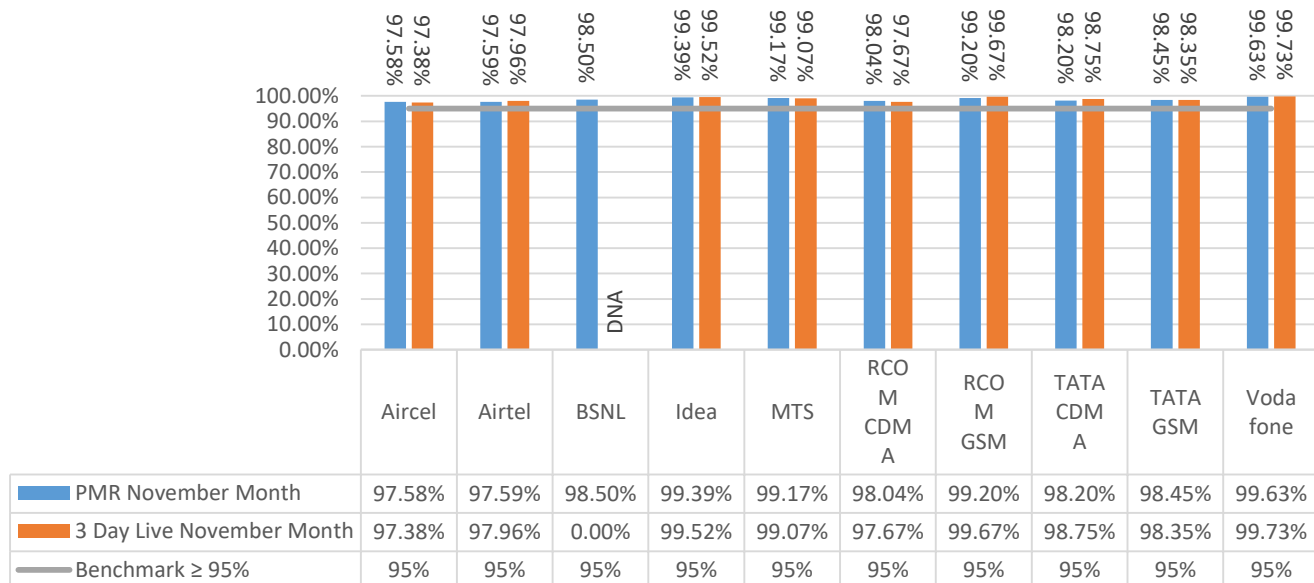
Call Set-up Success Rate (Within Licensee own network)



- It is clear from the analysis that all the operators are within benchmark.

8.3.3. KEY FINDINGS: CALL SETUP SUCCESS RATE: NOVEMBER

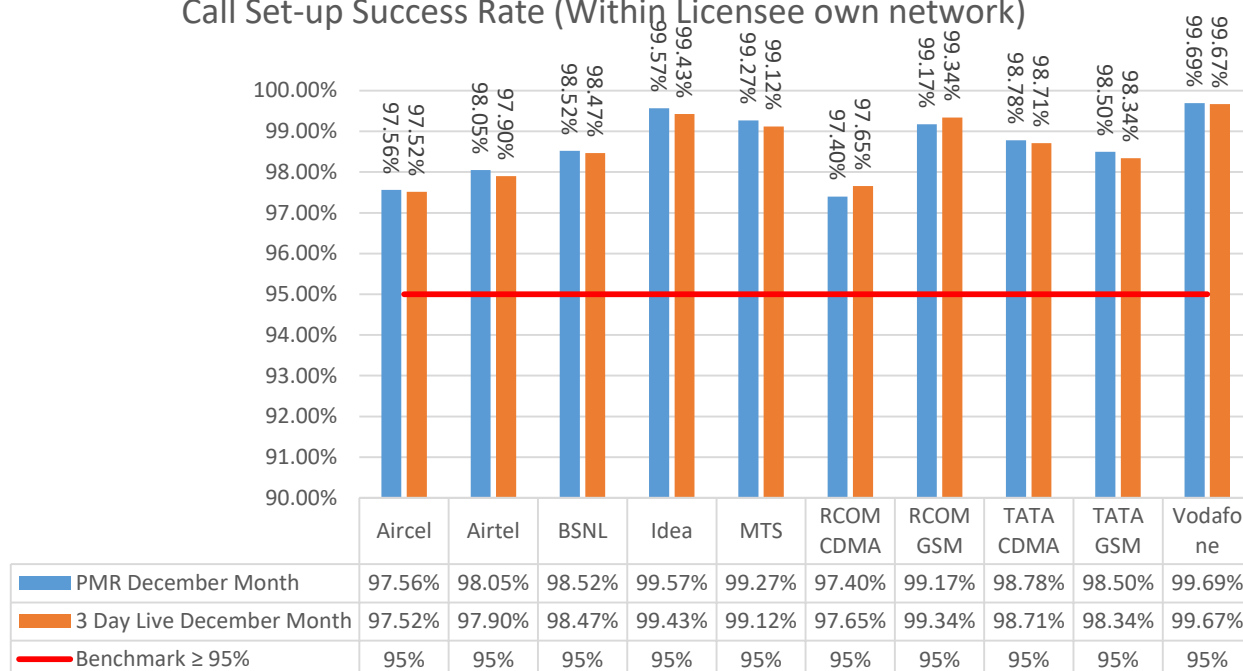
Call Set-up Success Rate (Within Licensee own network)



- It is clear from the analysis that all the operators are within benchmark.

8.3.4. KEY FINDINGS: CALL SETUP SUCCESS RATE: DECEMBER

Call Set-up Success Rate (Within Licensee own network)



- It is clear from the analysis that all the operators are within benchmark.

8.4. NETWORK CHANNEL CONGESTION: PAGING CHANNEL/ TCH CONGESTION/ POI

- Definition: It means a call is not connected because there is no free channel to serve the call attempt. This parameter represents congestion in the network. It happens at three levels:

- SDCCH Level: Stand-alone dedicated control channel
- TCH Level: Traffic Channel
- POI Level: Point of Interconnect.

- Computational Methodology:

$$\text{SDCCH / TCH Congestion\%} = \frac{(A1 \times C1) + (A2 \times C2) + \dots + (An \times Cn)}{(A1 + A2 + \dots + An)}$$

where:

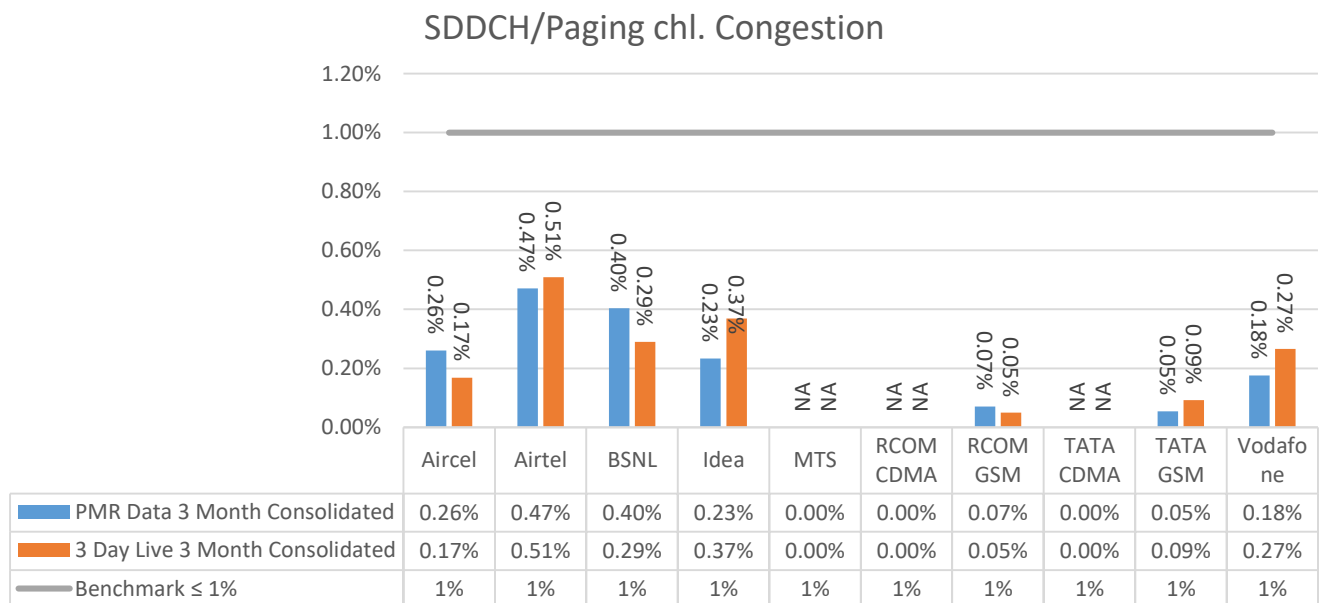
- A1 = Number of attempts to establish SDCCH / TCH made on day 1
- C1 = Average SDCCH / TCH Congestion % on day 1
- A2 = Number of attempts to establish SDCCH / TCH made on day 2
- C2 = Average SDCCH / TCH Congestion % on day 2
- An = Number of attempts to establish SDCCH / TCH made on day n
- Cn = Average SDCCH / TCH Congestion % on day n

$$\text{POI Congestion\%} = \frac{[(A1 \times C1) + (A2 \times C2) + \dots + (An \times Cn)]}{(A1 + A2 + \dots + An)}$$

Where:

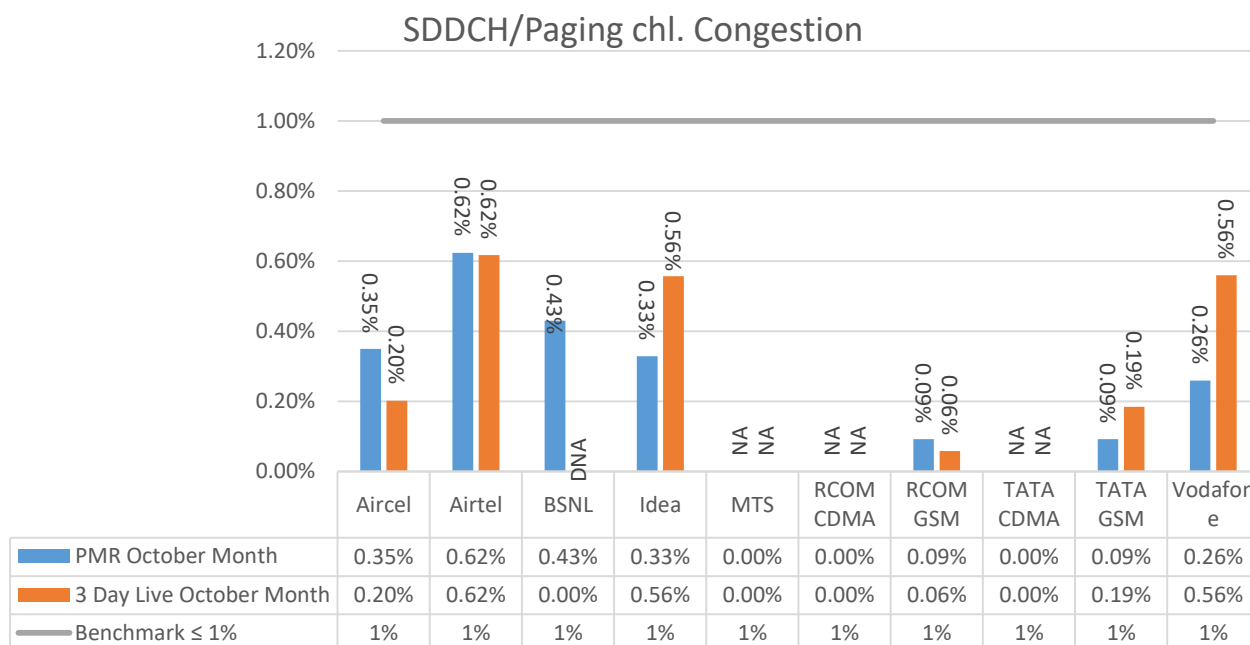
- A1 = POI traffic offered on all POIs (no. of calls) on day 1
 - C1 = Average POI Congestion % on day 1
 - A2 = POI traffic offered on all POIs (no. of calls) on day 2
 - C2 = Average POI Congestion % on day 2
 - An = POI traffic offered on all POIs (no. of calls) on day n
 - Cn = Average POI Congestion % on day n
- Benchmark: SDCCH Congestion: $\leq 1\%$, TCH Congestion: $\leq 2\%$, POI Congestion: $\leq 0.5\%$
 - Audit Procedure –
 - Audit of the details of SDCCH and TCH congestion percentages computed by the operator (using OMC–Switch data only) would be conducted.
 - The operator should be measuring this parameter during Time consistent busy hour (TCBH) only SDCCH.

8.4.1. KEY FINDINGS: SDCCH/ PAGING CHANNEL CONGESTION: CONSOLIDATED



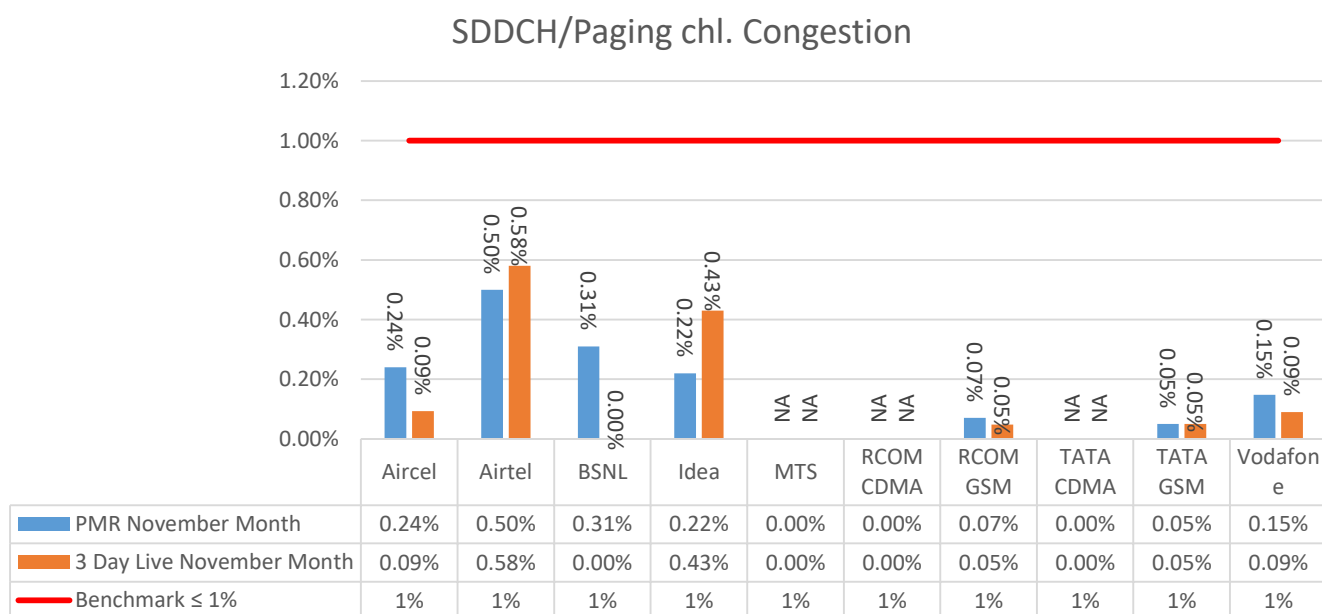
- It is clear from the analysis that all the operators are within benchmark.

8.4.2. KEY FINDINGS: SDCC/ PAGING CHANNEL CONGESTION: OCTOBER



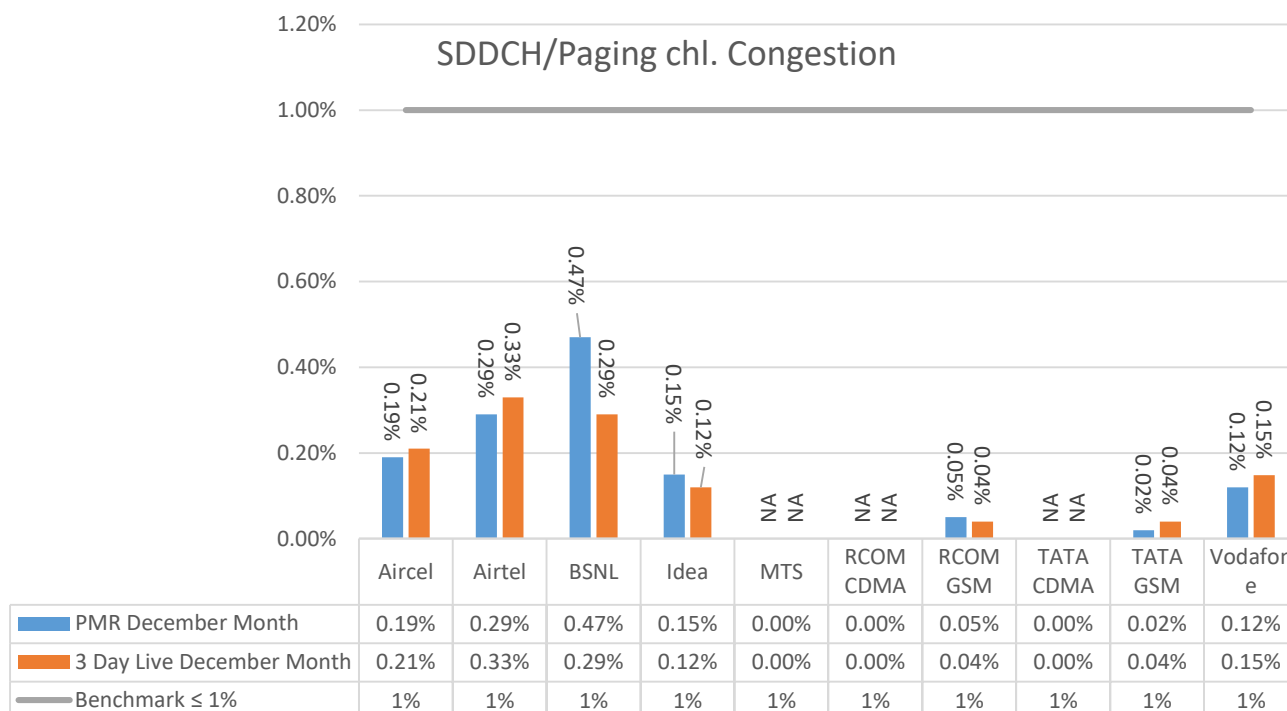
- It is clear from the analysis that all the operators are within benchmark.

8.4.3. KEY FINDINGS: SDCC/ PAGING CHANNEL CONGESTION: NOVEMBER



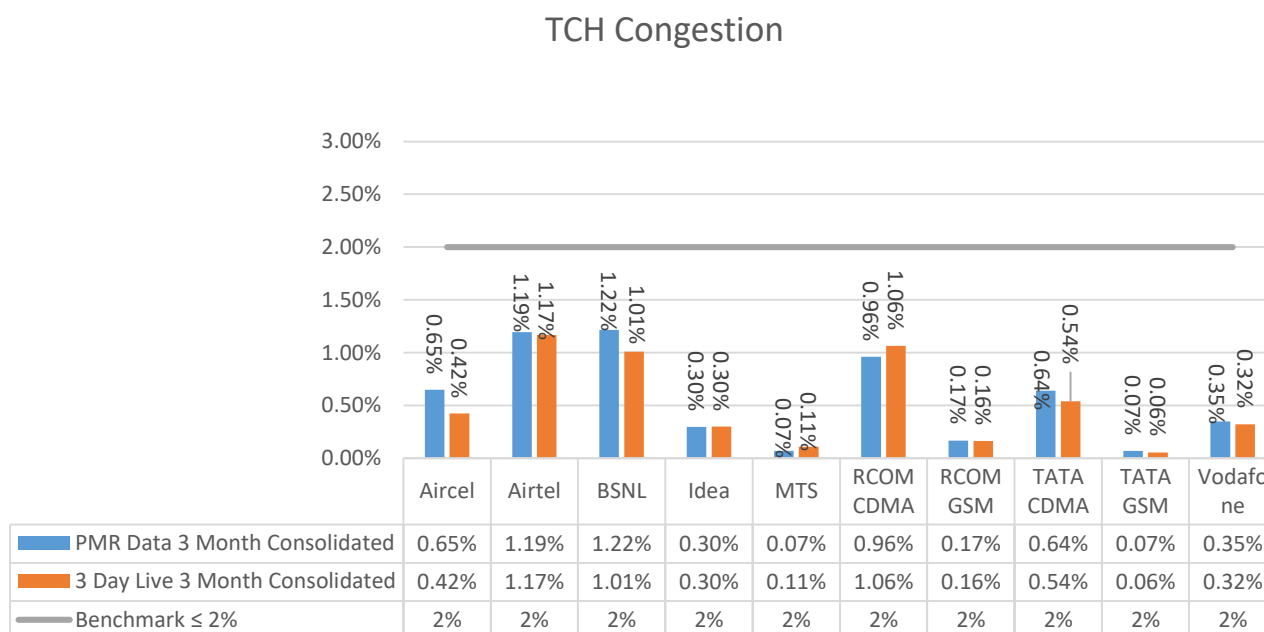
- It is clear from the analysis that all the operators are within benchmark.

8.4.4. KEY FINDINGS: SDDC/ PAGING CHANNEL CONGESTION: DECEMBER



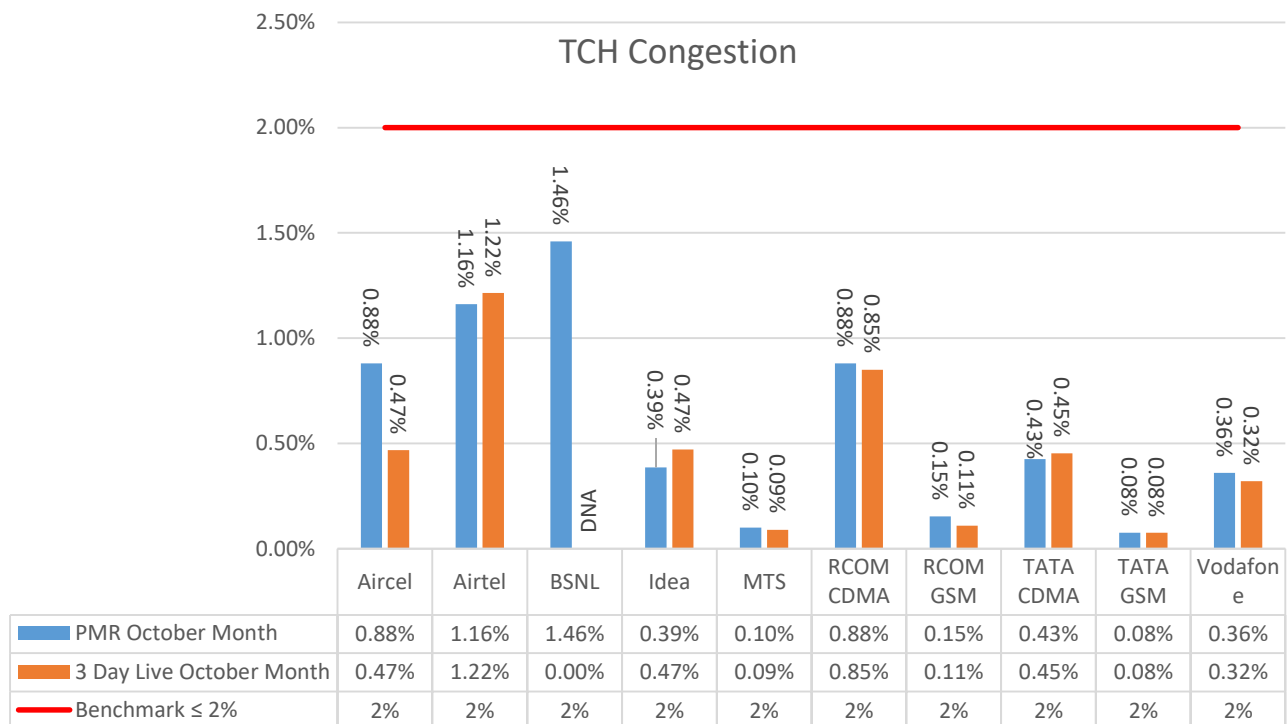
- It is clear from the analysis that all the operators are within benchmark.

8.4.5. KEY FINDINGS: TCH CONGESTION: CONSOLIDATED



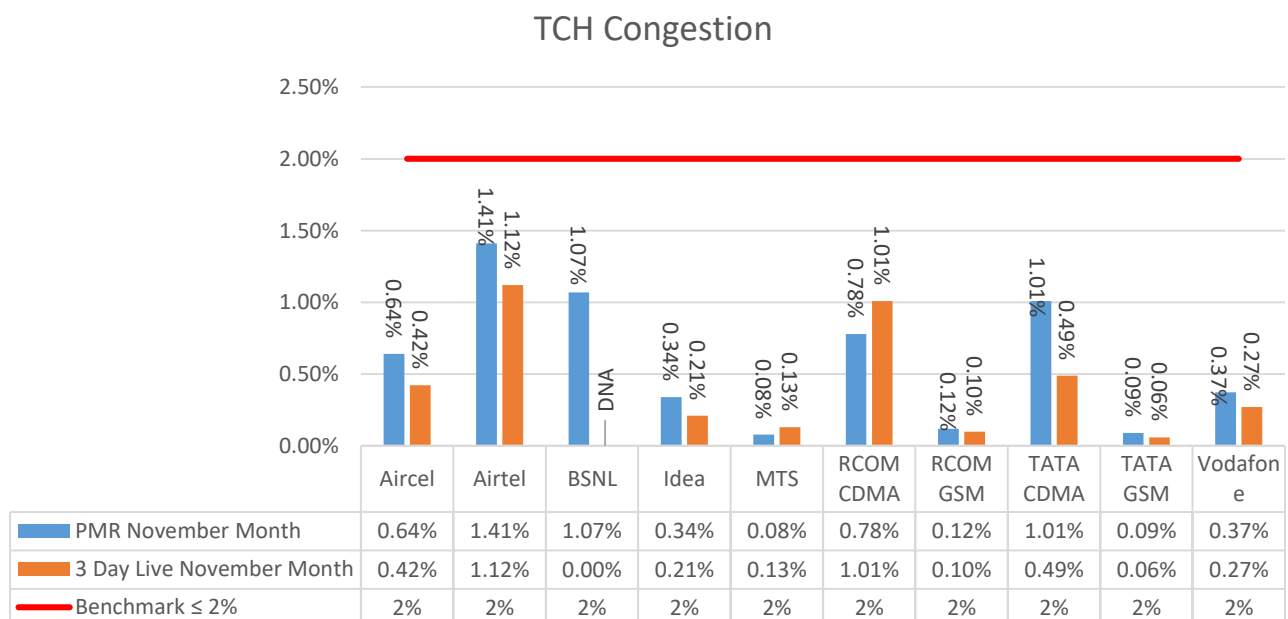
- It is clear from the analysis that all the operators are within benchmark.

8.4.6. KEY FINDINGS: TCH CONGESTION: OCTOBER



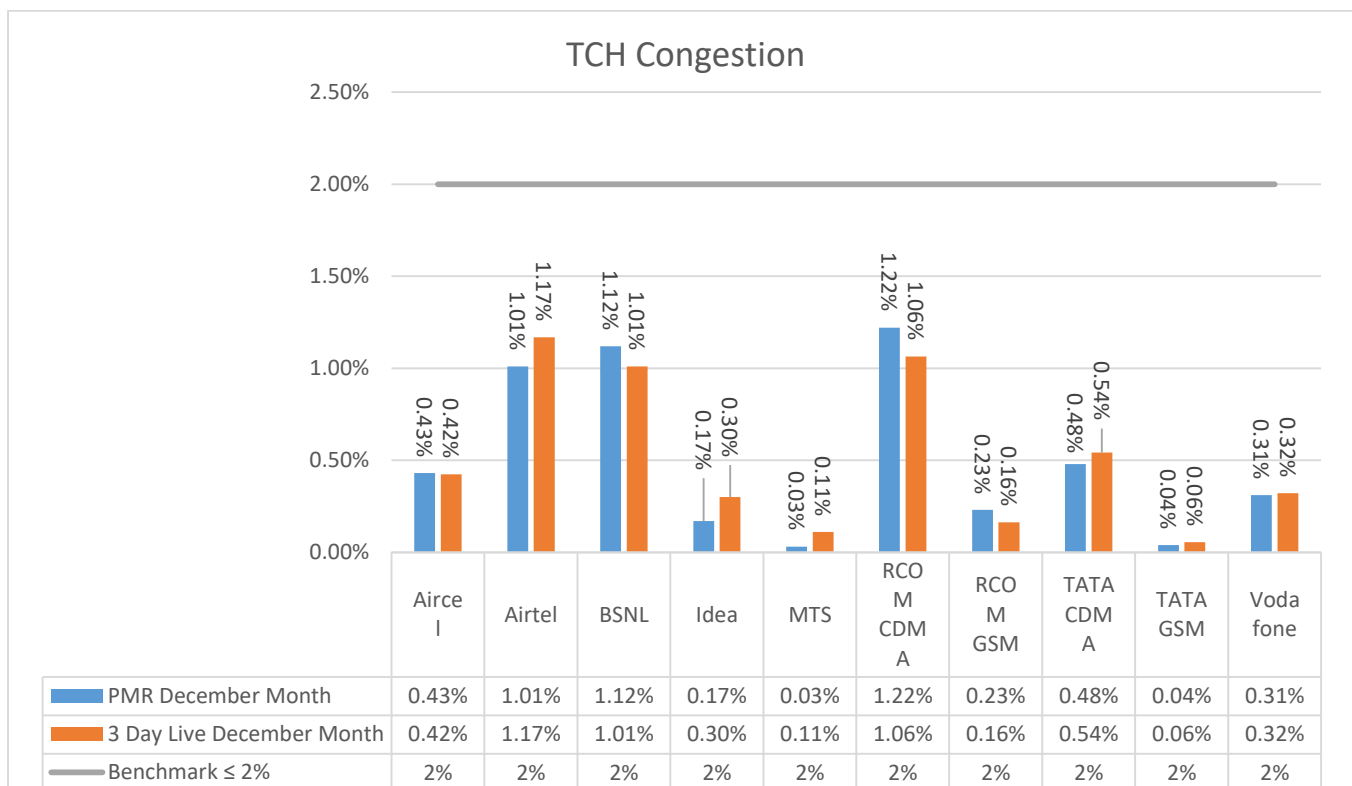
- It is clear from the analysis that all the operators are within benchmark.

8.4.7. KEY FINDINGS: TCH CONGESTION: NOVEMBER



- It is clear from the analysis that all the operators are within benchmark.

8.4.8. KEY FINDINGS: TCH CONGESTION: DECEMBER



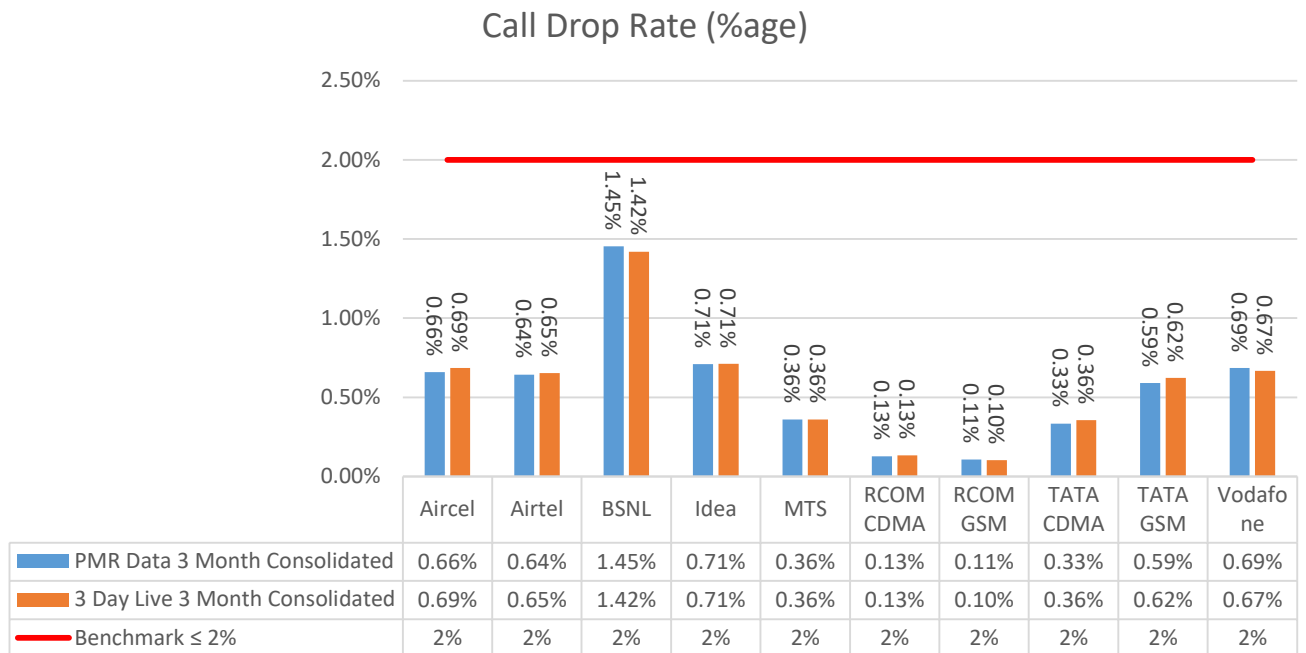
- It is clear from the analysis that all the operators are within benchmark.

8.5. CALL DROP RATE

- Definition - The dropped call rate is the ratio of successfully originated calls that were found to drop to the total number of successfully originated calls that were correctly released.
 - Total calls dropped = All calls ceasing unnaturally i.e. due to handover or due to radio loss
 - Total calls established = All calls that have TCH allocation during busy hour
- Computational Methodology: $\frac{\text{Total Calls Dropped}}{\text{Total Calls Established}} * 100$
- TRAI Benchmark: Call drop rate ≤ 2%
- Audit Procedure:
 - Audit of traffic data of the relevant quarter kept in OMC-R at MSCs and used for arriving at CDR was used.

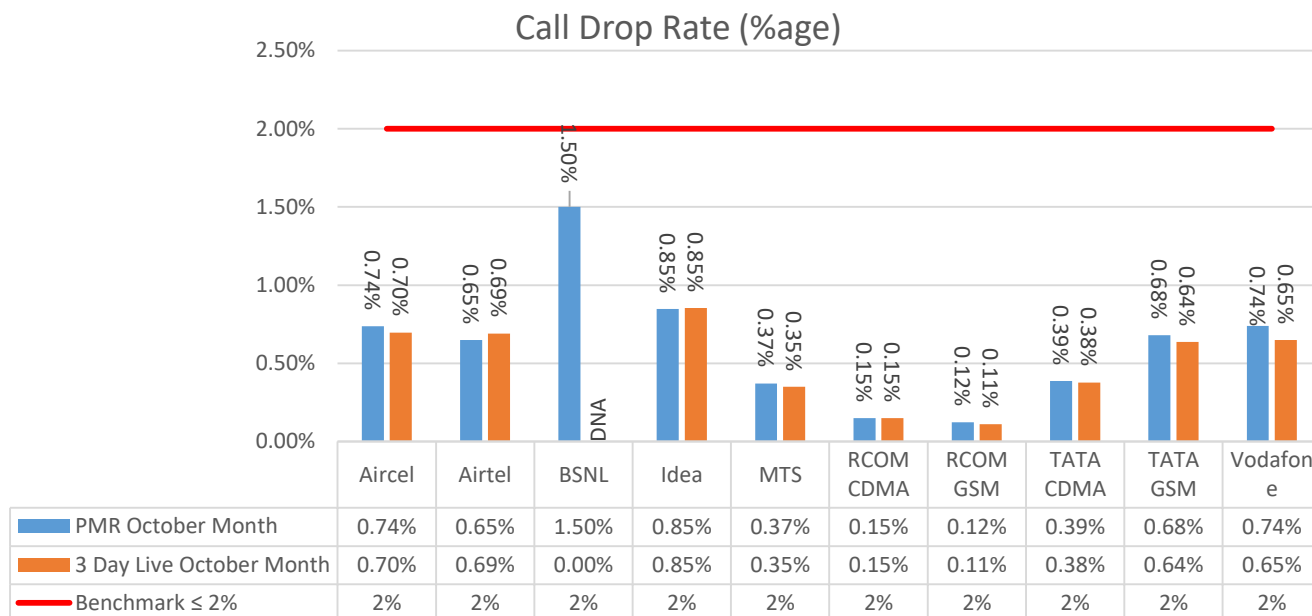
The operator should only be considering those calls which are dropped during Time consistent busy hour (TCBH) for all days of the relevant quarter.

8.5.1. KEY FINDINGS: CALL DROP RATE: CONSOLIDATED



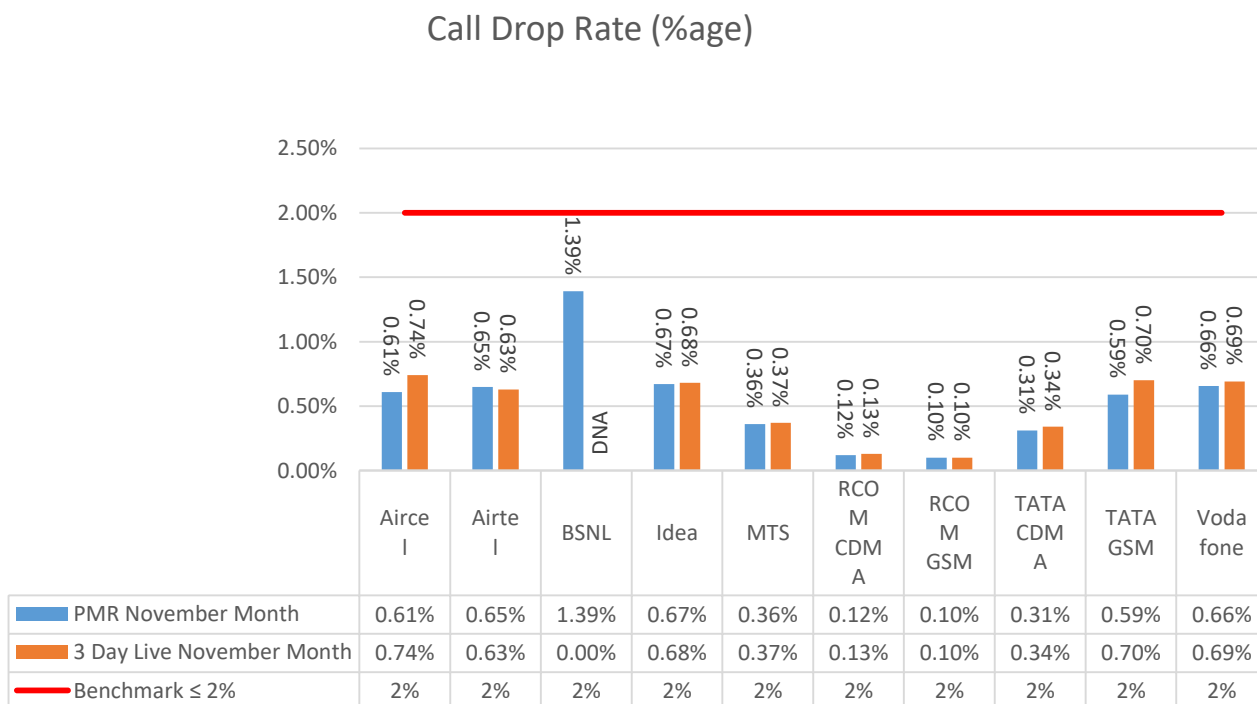
- It is clear from the analysis that all the operators are within benchmark.

8.5.2. KEY FINDINGS: CALL DROP RATE: OCTOBER



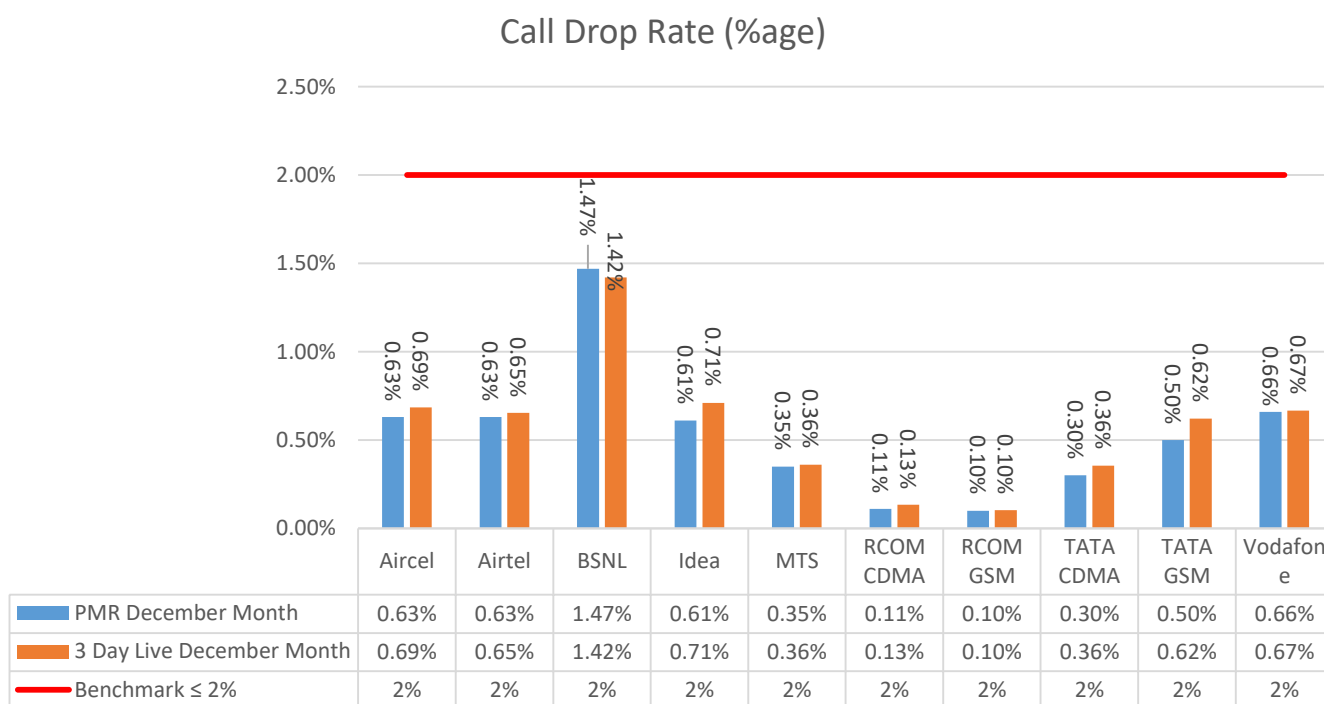
- It is clear from the analysis that all the operators are within benchmark.

8.5.3. KEY FINDINGS: CALL DROP RATE: NOVEMBER



- It is clear from the analysis that all the operators are within benchmark.

8.5.4. KEY FINDINGS: CALL DROP RATE: DECEMBER



- It is clear from the analysis that all the operators are within benchmark.

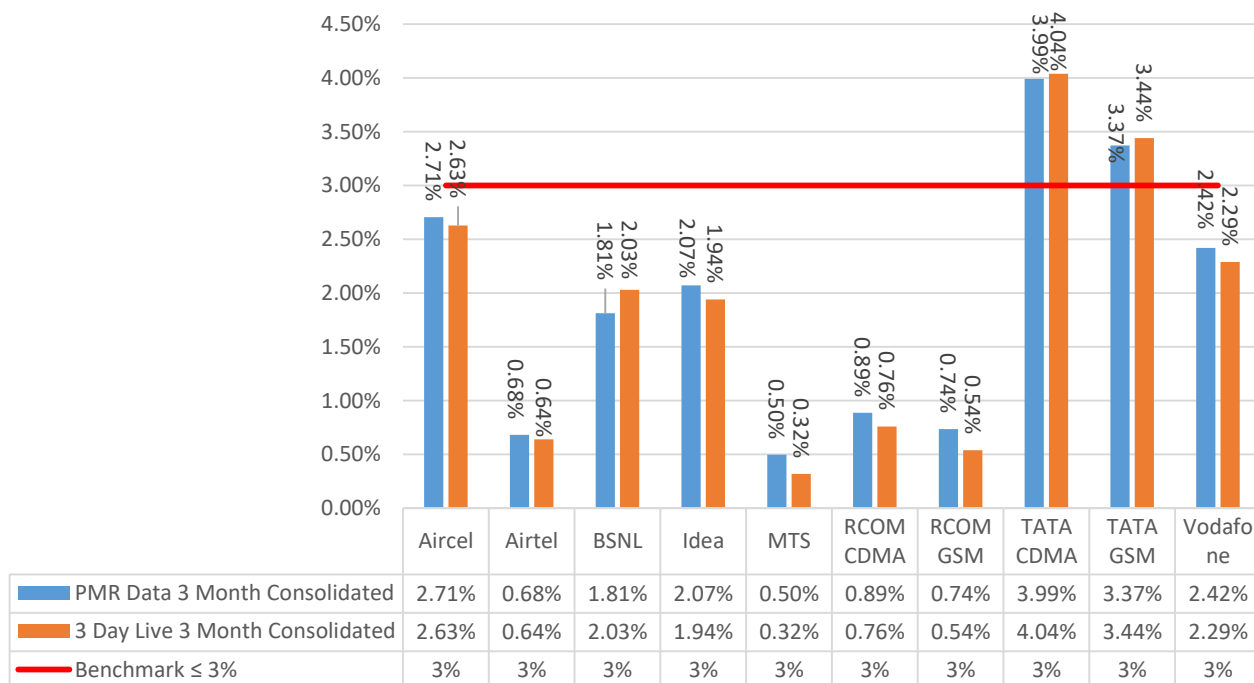
8.6. CELLS HAVING GREATER THAN 3% TCH DROP

- Definition- Worst Affected Cells having more than 3% TCH drop shall measure the ratio of total number of cells in the network to the ratio of cells having more than 3% TCH drop.
- Computational Methodology: $\frac{\text{Total number of cells having more than 3\% TCH drop during CBBH}}{\text{Total number of cells in the network}} * 100$
- TRAI Benchmark: Worst affected cells having more than 3% TCH drop rate ≤ 3%
- Audit Procedure:
 - Audit of traffic data of the relevant quarter kept in OMC-R at MSCs and used for arriving at CDR would be conducted.

The operator should only be considering those calls which are dropped during Cell Bouncing Busy hour (CBBH) for all days of the relevant quarter.

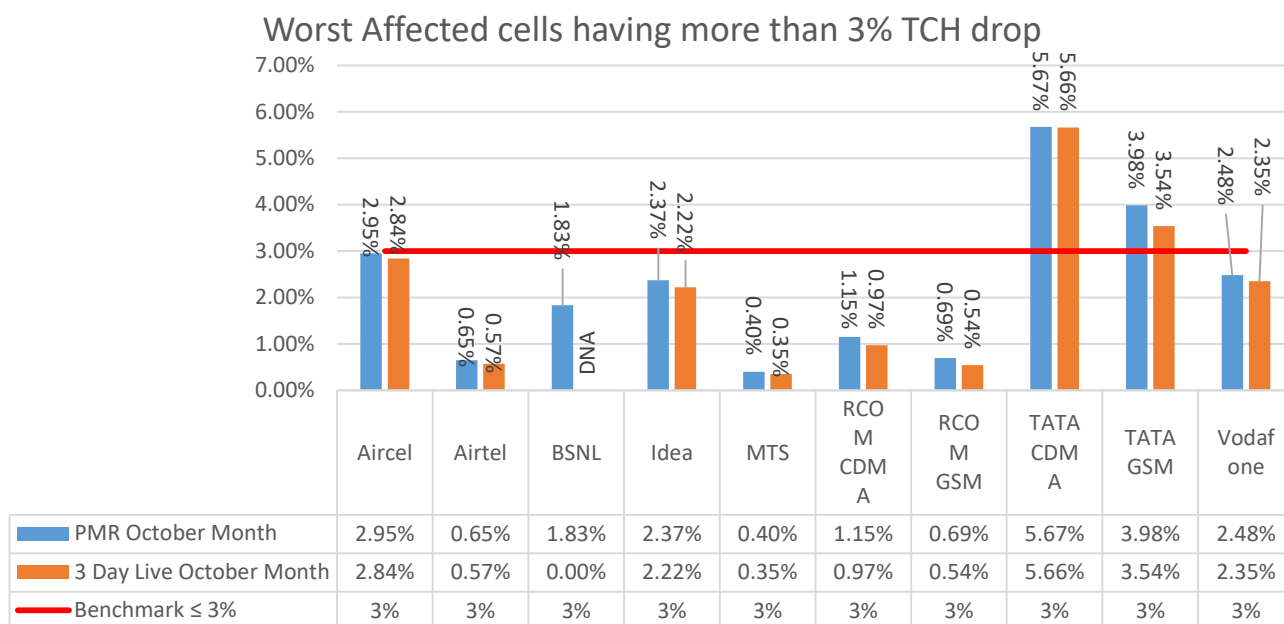
8.6.1. KEY FINDINGS: CELLS HAVING MORE THAN 3% TCH DROP: CONSOLIDATED

Worst Affected cells having more than 3% TCH drop



- TATA CDMA has a parameter value of **3.99%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA CDMA has a parameter value of **4.04%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.44%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

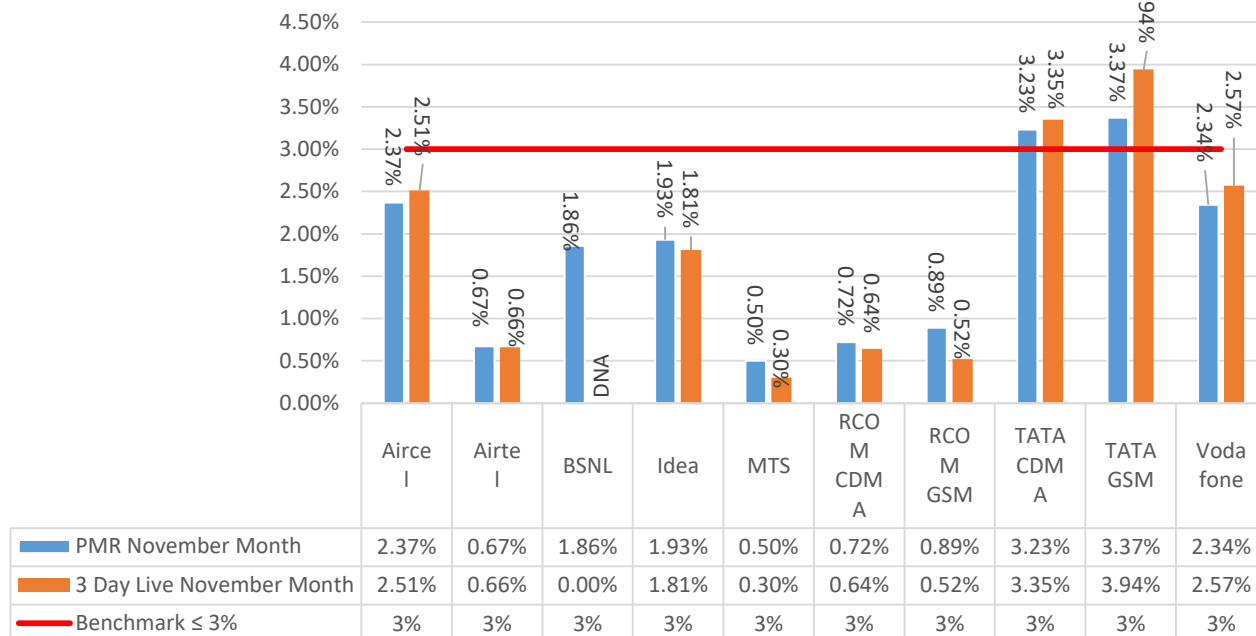
8.6.2. KEY FINDINGS: CELLS HAVING MORE THAN 3% TCH DROP: OCTOBER



- TATA CDMA has a parameter value of **5.67%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.98%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA CDMA has a parameter value of **5.66%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.54%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

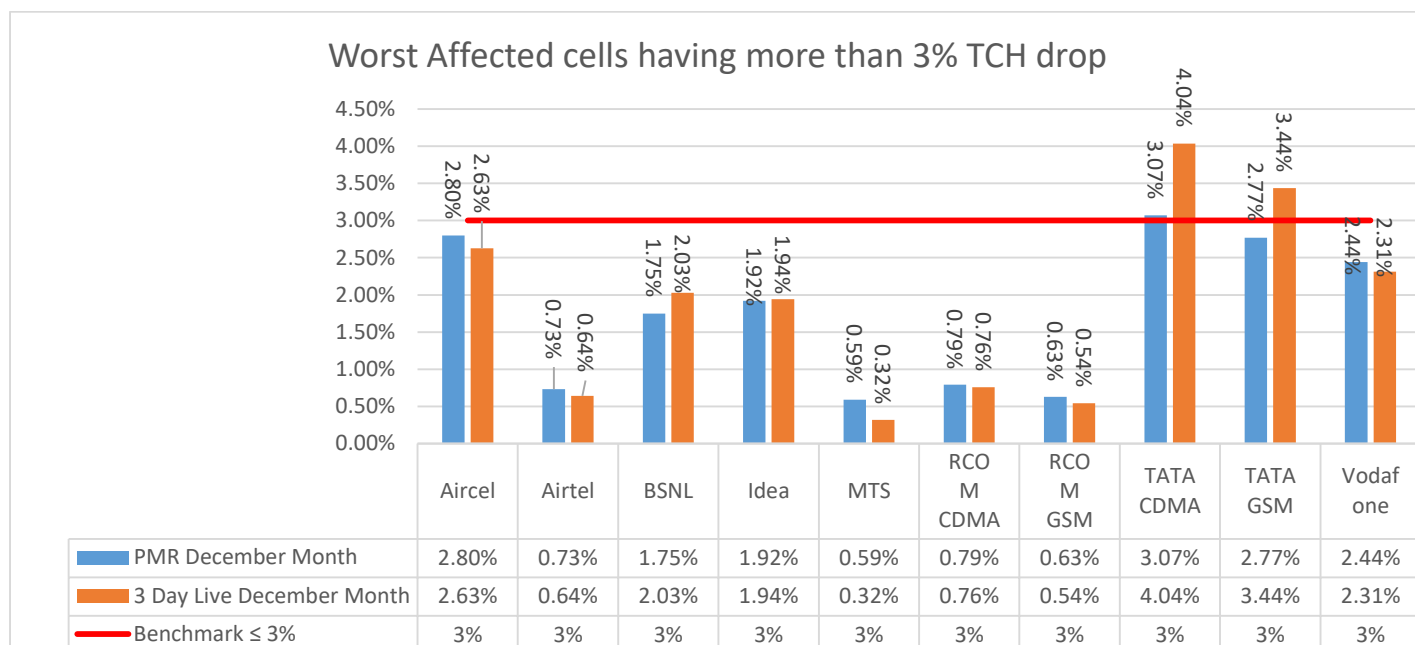
8.6.3. KEY FINDINGS: CELLS HAVING MORE THAN 3% TCH DROP: NOVEMBER

Worst Affected cells having more than 3% TCH drop



- TATA CDMA has a parameter value of **3.23%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA CDMA has a parameter value of **3.35%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.94%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

8.6.4. KEY FINDINGS: CELLS HAVING MORE THAN 3% TCH DROP: DECEMBER



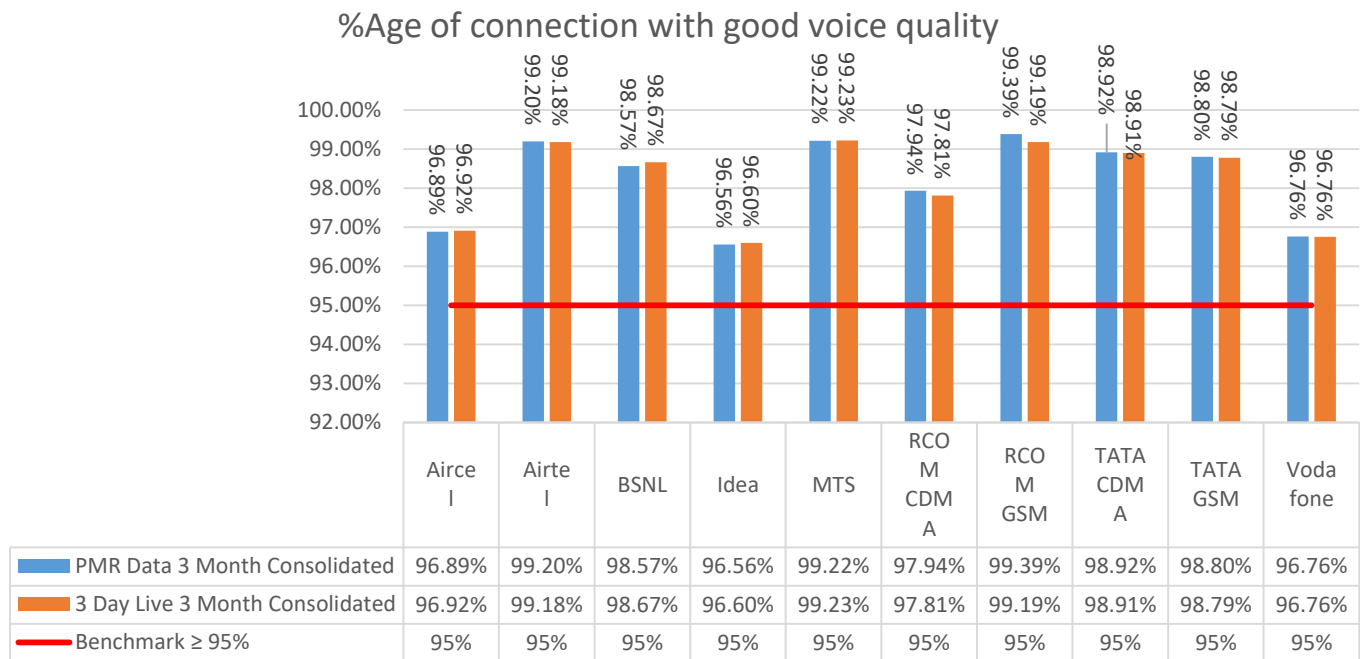
- TATA CDMA has a parameter value of **3.07%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%
- TATA CDMA has a parameter value of **4.04%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%
- TATA GSM has a parameter value of **3.44%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%

8.7. VOICE QUALITY

- Definition:
 - For GSM service providers the calls having a value of 0 –5 are considered to be of good quality (on a seven point scale)
 - For CDMA the measure of voice quality is Frame Error Rate (FER). FER is the probability that a transmitted frame will be received incorrectly. Good voice quality of a call is considered when it FER value lies between 0 – 4 %
- Computational Methodology:

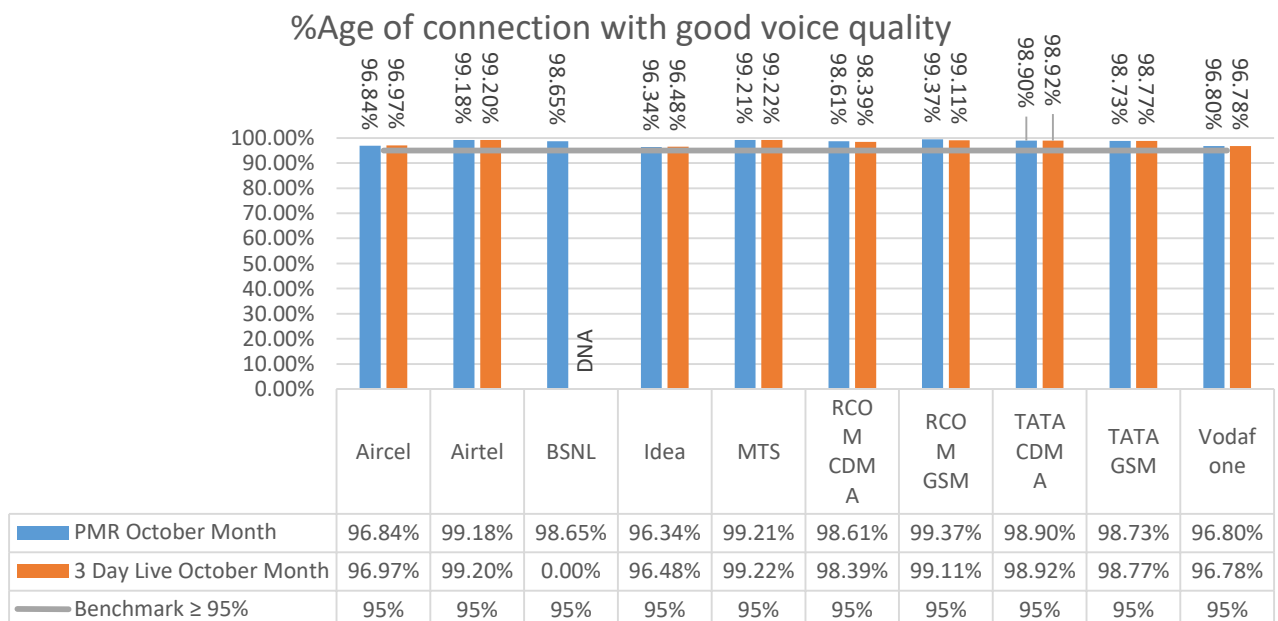
$$\% \text{ Connections with good voice quality} = \frac{\text{No.of voice samples with good voice quality}}{\text{Total number of samples}} * 100$$
- TRAI Benchmark: ≥ 95%
- Audit Procedure –
 - A sample of calls would be taken randomly from the total calls established.
 - The operator should only be considering those calls which are meeting the desired benchmark of good voice quality.

8.7.1. KEY FINDINGS: VOICE QUALITY: CONSOLIDATED



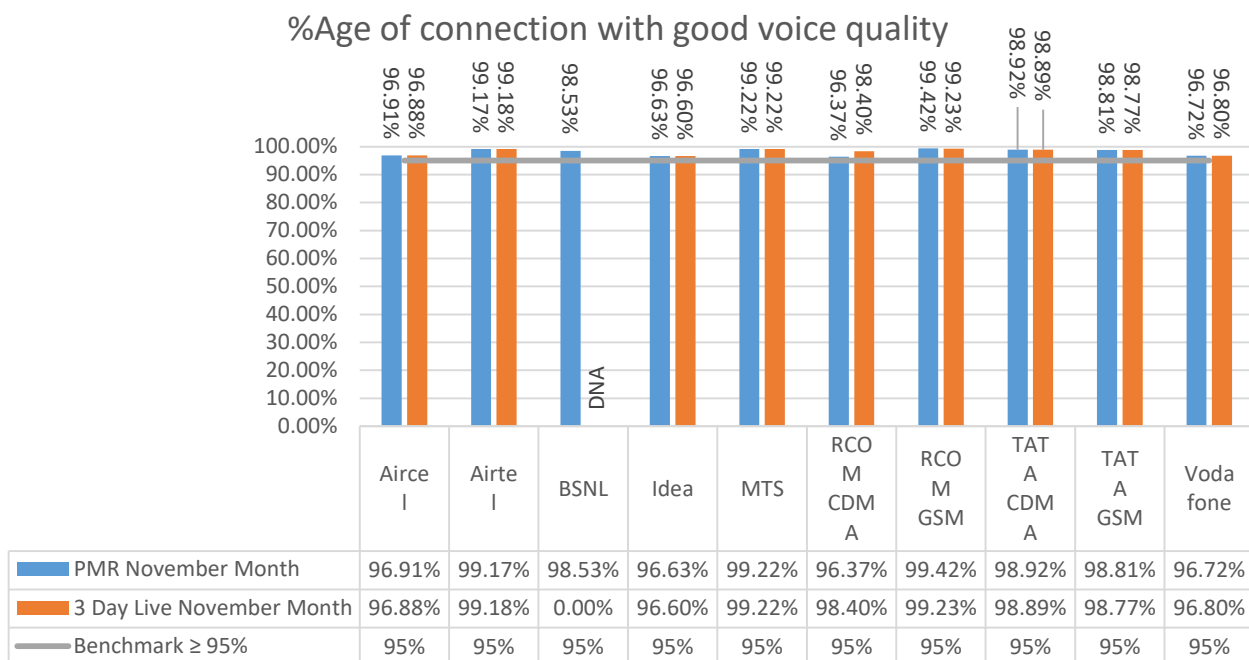
- It is clear from the analysis that all the operators are within benchmark.

8.7.2. KEY FINDINGS: VOICE QUALITY: OCTOBER



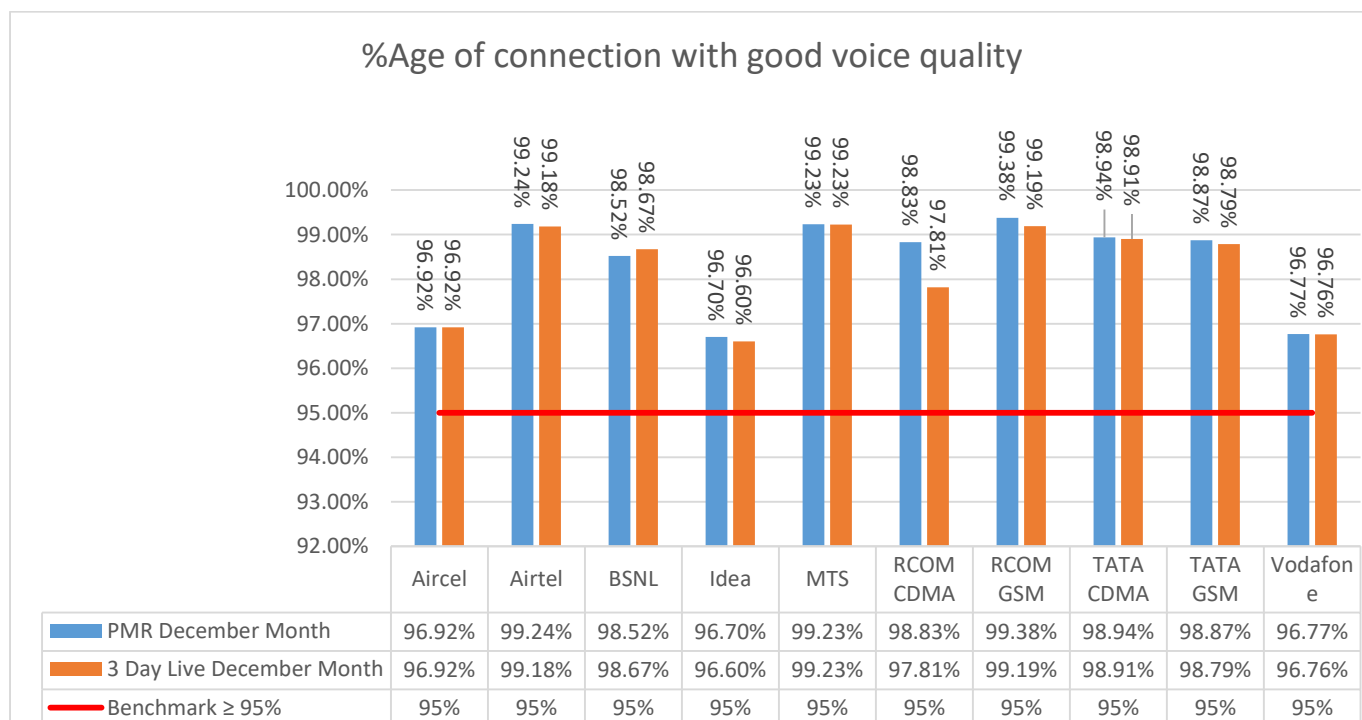
- It is clear from the analysis that all the operators are within benchmark.

8.7.3. KEY FINDINGS: VOICE QUALITY: NOVEMBER



- It is clear from the analysis that all the operators are within benchmark.

8.7.4. KEY FINDINGS: VOICE QUALITY: DECEMBER



- It is clear from the analysis that all the operators are within benchmark.

8.8. POI CONGESTION: CONSOLIDATED

POI Congestion: PMR Consolidated											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3666195	5813201	512938	3481301	692887	630316	839815	428575	372640	3371481
Total traffic served on all POIs (Erlang)		91465	134226	10942	79617	20808	14077	19192	9627	8418	64514
Total No. of circuits on all individual POIs		176632	220473	36663	134298	49532	29953	30261	36405	28794	143215
Total number of working POI Service Area wise		37	117	137	132	65	91	24	175	30	65
Capacity of all POIs		172668	215368	30834	129362	176970	27274	28870	35047	28698	144567
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	0	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		0	0	0	0	0	0	0	0	0	0

POI Congestion: 3 Day Live Consolidated											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3754686	5816962.33	528195	3472333.767	24032250.67	724482.6667	814932	419214	365359.6667	3433319.888
Total traffic served on all POIs (Erlang)		92559	137909	11207	77705.66667	21436	16038.66667	17567.66667	9777	8435	1825096.786
Total No. of circuits on all individual POIs		176631.6667	151236	36663	134261.3333	49532.66667	30124.33333	30354	40176	28837	142564
Total number of working POI Service Area wise		37	118	137	132.3333333	65	91.11	24	219	30	65
Capacity of all POIs		172723.3333	215572.667	30884	129392.3333	49636.43667	27446	28962	39467	28698	143909.6667
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	0	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		0	0	0	0	0	0	0	0	0	0

8.8.1. POI Congestion: October

POI Congestion: PMR October											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		4021770	5850594	506407	3565999	737959	480271	853470	480271	393268	3331630
Total traffic served on all POIs (Erlang)		98777	131630	10843	82415	21260	10322	19701	10322	8635	65335
Total No. of circuits on all individual POIs		174825	213315	36663	131826	49347	28882	30075	28862	28837	141805
Total number of working POI Service Area wise		37	114	137	129	65	88	24	88	30	65
Capacity of all POIs		170850	208345	30734	126812	431450.01	26207	28686	26207	28698	143143
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	NA	0	0	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		NA	0	0	0	0	0	0	0	0	0

POI Congestion : 3 Day Live October											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3531219	5817243	DNA	3472539	703339	764180	872786	424085	351429	3352063
Total traffic served on all POIs (Erlang)		91754	138023	DNA	78626	20981	16667	19447	9417	8191	62522
Total No. of circuits on all individual POIs		175027	7091	DNA	131547	49481	29053	30354	40176	28837	141805
Total number of working POI Service Area wise		37	117	DNA	129	65	91	24	219	30	65
Capacity of all POIs		171123	210446	DNA	126733	49585	26459	28962	39467	28698	143143
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	DNA	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		0	0	DNA	0	0	0	0	0	0	0

8.8.2. POI Congestion: November

POI Congestion : PMR November											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3557059	5849777	509721	3517941	693688	700662	825985	417138	370125	3091232
Total traffic served on all POIs (Erlang)		87472.28267	135704	10802	78409	20739	15543	18164	9457	8295	61494
Total No. of circuits on all individual POIs		177460	223387	36663	135787	49615	30485	30354	40176	28772	143920
Total number of working POI Service Area wise		37	118	137	134	65	92	24	219	30	65
Capacity of all POIs		173502	218233	30884	130886	49719	27823	28962	39467	28698	145279
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	0	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		0	0	0	NA	0	0	0	NA	NA	0

POI Congestion: 3 Day Live November											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3756902	5755073	DNA	3434059	70710047	626998	786005	421375	380649	3126351.33
Total traffic served on all POIs (Erlang)		94862	137592	DNA	73650	22049	13947	16628	9850	8360	62605
Total No. of circuits on all individual POIs		177559	222005	DNA	135603	49481	30614	30354	40176	28837	141967
Total number of working POI Service Area wise		37	118	DNA	134	65	90	24	219	30	65
Capacity of all POIs		173654	216851	DNA	130707	49584	27938	28962	39467	28698	143307
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	DNA	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		0	0	DNA	0	0	0	0	0	0	0

8.8.3. POI Congestion: December

POI Congestion : PMR DECEMBER 15											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3419756	5739233	522685	3359965	647015	710014	839990	388316	354528	3691582
Total traffic served on all POIs (Erlang)		88145.38677	135343.5188	11181.05258	78026	20424.71097	16366.78111	19712.28434	9101.73506	8323.972903	66714.02516
Total No. of circuits on all individual POIs		177610	224717.7097	36663	135282.129	49635.22581	30492.06452	30354	40176	28772	143920
Total number of working POI Service Area wise		37	119	137	134	65	91.64516129	24	219	30	65
Capacity of all POIs		173652.5534	219524.8387	30884	130388	49739.31	27793.16438	28962.2002	39467	28698	145279
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	NA	0	NA.	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

POI CONGESTION: 3 DAYS LIVE DECEMBER											
POI Congestion	Benchmark	Aircel	Airtel	BSNL	Idea	MTS	RCOM CDMA	RCOM GSM	TATA CDMA	TATA GSM	Vodafone
		2G	2G	2G	2G	2G	2G	2G	2G	2G	2G
Total No. of call attempts on POI		3975937	5878571	528195	3510403	683366	782270	786005	412182	364001	3821545
Total traffic served on all POIs (Erlang)		91061	138112	11207	80841	21278	17502	16628	10064	8754	5350163.467
Total No. of circuits on all individual POIs		177309	224612	36663	135634	49636	30706	30354	40176	28837	143920
Total number of working POI Service Area wise		37	119	137	134	65	92	24	219	30	65
Capacity of all POIs		173393	219421	30884	130737	49740	27941	28962	39467	28698	145279
No. of all POIs having $\geq 0.5\%$ POI congestion	$\leq 0.5\%$	0	0	0	0	0	0	0	0	0	0
Name of POI not meeting the benchmark (having $\geq 0.5\%$ POI congestion)		NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL

9. L1 CALLING DATA

L1 Calling data covers all the SDCA covered across the two operator assisted drive tests:

- Ajmer: 25th Nov to 27th Nov 2015
- Jodhpur: 30th Nov 2015 to 2nd Dec 2015
- Sikar: 28th Dec to 30th Dec 2015

9.1. AIRCEL

S R. N O	EMERGENCY NUMBER	NASHIR ABAD	KE KDI	KISHAN GARH	BHOPALGARH, PIPAR CITY	Mathania, Osian, Lohawat	JHANWAR, JODHPUR	Mohan Nagar, Salasar, Ne chhwa	Neem Ka Thana, Shri Madhavpur,	Sikar, Shri Khatushyam Ji
1	100	✓	✓	✓	☒	✓	☒	✓	✓	✓
2	101	✓	✓	✓	☒	✓	☒	✓	✓	✓
3	102	✓	✓	✓	☒	✓	☒	✓	✓	✓
4	104	✓	✓	✓	☒	✓	☒	✓	✓	✓
5	108	✓	✓	✓	☒	✓	☒	✓	✓	✓
6	138	✓	✓	✓	☒	✓	☒	☒	☒	✓
7	149	✓	✓	✓	☒	☒	☒	☒	☒	✓
8	181	✓	✓	✓	☒	✓	☒	☒	☒	✓
9	182	✓	✓	✓	☒	✓	☒	✓	✓	✓
10	1033	✓	✓	✓	☒	✓	☒	✓	✓	✓
11	1037	☒	☒	☒	☒	☒	☒	☒	☒	☒
12	1056	✓	✓	✓	☒	☒	☒	✓	✓	✓
13	1060	☒	☒	☒	☒	☒	☒	☒	☒	☒
14	1063	☒	☒	☒	☒	☒	☒	☒	☒	☒
15	1064	☒	☒	☒	☒	☒	☒	☒	☒	☒
16	1070	☒	☒	☒	☒	✓	☒	✓	✓	☒
17	1071	☒	☒	☒	☒	☒	☒	✓	✓	☒
18	1072	☒	☒	☒	☒	✓	☒	✓	✓	☒
19	1073	☒	☒	☒	☒	☒	☒	✓	✓	☒
20	1077	☒	☒	☒	☒	✓	☒	✓	✓	☒
21	1090	✓	✓	✓	☒	✓	☒	✓	✓	✓
22	1091	☒	☒	☒	☒	☒	☒	☒	☒	☒
23	1097	☒	☒	☒	☒	✓	☒	✓	✓	☒
24	1099	☒	☒	☒	☒	☒	☒	☒	☒	☒
25	1511	☒	☒	☒	☒	☒	☒	☒	☒	☒
26	1512	☒	☒	☒	☒	✓	☒	☒	☒	☒
27	1514	☒	☒	☒	☒	☒	☒	☒	☒	☒
28	1903	☒	☒	☒	☒	✓	☒	✓	✓	☒

29	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	<input checked="" type="checkbox"/>	✓	✓	<input checked="" type="checkbox"/>
30	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	<input checked="" type="checkbox"/>	✓	✓	<input checked="" type="checkbox"/>
33	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.2. AIRTEL

SR N O.	EMERGENCY NUMBER	NASHIRA BAD	KEK DI	KISHANGA RH	BHOPALGARH, PIPAR CITY	Mathania, Osian, Lohawat	JHANWAR, JODHPUR
1	100	✓	✓	✓	✓	✓	✓
2	101	✓	✓	✓	✓	✓	✓
3	102	✓	✓	✓	✓	✓	✓
4	104	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	108	✓	✓	✓	✓	✓	✓
6	138	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	182	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	1033	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	1063	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	1064	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	1071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	1072	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	1073	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	1077	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	1090	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
22	1091	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	1097	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	1099	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

25	1511	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	1512	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	1514	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	1903	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.3. BSNL

SR. NO.	EMERGENCY NUMBER	Nasirabad	Bhina	Kishangarh	Bopalgarh/Piparcity	Mathania/Osian/Lohawat	Jhanwar/Jodhpur
1	100	✓	✓	✓	✓	✓	✓
2	101	✓	✓	✓	✓	✓	✓
3	102	✓	✓	✓	✓	✓	✓
4	104	✓	✓	✓	✓	✓	✓
5	108	✓	✓	✓	✓	✓	✓
6	138	✓	✓	✓	✓	✓	✓
7	149	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	182	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
10	1033	✓	✓	✓	✓	✓	✓
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
14	1063	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
15	1064	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
16	1070	✓	✓	✓	✓	✓	✓
17	1071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	✓	✓	✓
18	1072	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	1073	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	1077	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	1090	✓	✓	✓	✓	✓	✓
22	1091	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	1097	✓	✓	✓	✓	✓	✓

24	1099	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	1511	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	1512	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	1514	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	1903	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.4. IDEA

SR. NO.	EMERGENCY NUMBER	BEAVER	BHINAY	JODHPUR
1	100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	101	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	102	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	104	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	108	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	138	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	182	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	1033	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	1063	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	1064	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	1071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	1072	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
19	1073	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	1077	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	1090	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	1091	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

23	1097	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	1099	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	1511	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	1512	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	1514	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	1903	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.5. MTS

S R. N O.	EMERGENCY NUMBER	Aj me r	Bea wer	Kishan garh	Jodh pur	Jodh pur	Jodh pur	Mohan Nagar, Salasar, Nec hhwa	Neem Ka Thana, Shri Madhavpur,	Sikar, Shri Khatushyam Ji
1	100	✓	✓	✓	✓	✓	✓	✓	✓	✓
2	101	✓	✓	✓	✓	✓	✓	✓	✓	✓
3	102	✓	✓	✓	✓	✓	✓	✓	✓	✓
4	104	✓	✓	✓	✓	✓	✓	✓	✓	✓
5	108	✓	✓	✓	✓	✓	✓	✓	✓	✓
6	138	✓	✓	✓	✓	✓	✓	✓	✓	✓
7	149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	✓	✓	✓	✓	✓	✓	✓	✓	✓
9	182	✓	✓	✓	✓	✓	✓	✓	✓	✓
10	1033	✓	✓	✓	✓	✓	✓	✓	✓	✓
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	1063	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	1064	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	1070	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	1071	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	1072	✓	✓	✓	✓	✓	✓	✓	✓	✓
19	1073	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	1077	✓	✓	✓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

21	1090	✓	✓	✓	☒	☒	☒	☒	☒	☒
22	1091	✓	✓	✓	✓	✓	✓	✓	✓	✓
23	1097	✓	✓	✓	✓	✓	✓	✓	✓	✓
24	1099	☒	☒	☒	☒	☒	☒	☒	☒	☒
25	1511	☒	☒	☒	✓	✓	✓	✓	✓	✓
26	1512	✓	✓	✓	✓	✓	✓	✓	✓	✓
27	1514	✓	✓	✓	☒	☒	☒	☒	☒	☒
28	1903	✓	✓	✓	✓	✓	✓	✓	✓	✓
29	1909	✓	✓	✓	✓	✓	✓	✓	✓	✓
30	1912	✓	✓	✓	✓	✓	✓	✓	✓	✓
31	1916	✓	✓	✓	☒	☒	☒	☒	☒	☒
32	1950	✓	✓	✓	✓	✓	✓	✓	✓	✓
33	10580	✓	✓	✓	☒	☒	☒	☒	☒	☒
34	10589	☒	☒	☒	☒	☒	☒	☒	☒	☒
35	10740	☒	☒	☒	☒	☒	☒	☒	☒	☒
36	10741	☒	☒	☒	☒	☒	☒	☒	☒	☒
37	15100	☒	☒	☒	✓	✓	✓	✓	✓	✓
38	155214	✓	✓	✓	☒	☒	☒	☒	☒	☒
39	155304	☒	☒	☒	☒	☒	☒	☒	☒	☒

9.6. RCOM CDMA

SR. NO.	EMERGENCY NUMBER	Ajmer	Beawer	Kishangarh	Ajmer	Beawer	Kishangarh
1	100	✓	✓	✓	✓	✓	✓
2	101	✓	✓	✓	☒	☒	☒
3	102	✓	✓	✓	✓	✓	✓
4	104	✓	✓	✓	✓	✓	✓
5	108	✓	✓	✓	✓	✓	✓
6	138	✓	✓	✓	✓	✓	✓
7	149	☒	☒	☒	☒	☒	☒
8	181	✓	✓	✓	✓	✓	✓
9	182	✓	✓	✓	✓	✓	✓
10	1033	✓	✓	✓	✓	✓	✓
11	1037	☒	☒	☒	☒	☒	☒
12	1056	☒	☒	☒	☒	☒	☒
13	1060	☒	☒	☒	☒	☒	☒
14	1063	☒	☒	☒	☒	☒	☒
15	1064	☒	☒	☒	☒	☒	☒
16	1070	☒	☒	☒	☒	☒	☒
17	1071	☒	☒	☒	☒	☒	☒
18	1072	✓	✓	✓	✓	✓	✓
19	1073	☒	☒	☒	☒	☒	☒

20	1077	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	1090	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	1091	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	1097	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	1099	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	1511	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	1512	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1514	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	1903	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.7. RCOM GSM

SR. NO.	EMERGENCY NUMBER	Ajmer	Beawer	Kishangarh	Ajmer	Beawer	Kishangarh
1	100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	101	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	102	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	104	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	108	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	138	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	182	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	1033	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	1063	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	1064	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	1071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
18	1072	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

19	1073	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
20	1077	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
21	1090	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
22	1091	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
23	1097	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
24	1099	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
25	1511	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
26	1512	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
27	1514	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
28	1903	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
29	1909	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
30	1912	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
31	1916	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
32	1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
33	10580	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
34	10589	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
35	10740	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
36	10741	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
37	15100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
38	155214	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
39	155304	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

9.8. TTSL CDMA

SR. NO.	EMERGENCY NUMBER	Bhilwara	Sikar
1	100	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	101	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	102	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	104	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	108	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6	138	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7	149	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8	181	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	182	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10	1033	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11	1037	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12	1056	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
13	1060	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
14	1063	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
15	1064	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
16	1070	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
17	1071	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

18	1072	✓	✓
19	1073	✓	✓
20	1077	✓	✓
21	1090	✓	✓
22	1091	☒	☒
23	1097	✓	✓
24	1099	☒	☒
25	1511	☒	☒
26	1512	☒	☒
27	1514	☒	☒
28	1903	☒	☒
29	1909	✓	✓
30	1912	☒	☒
31	1916	☒	☒
32	1950	✓	✓
33	10580	☒	☒
34	10589	☒	☒
35	10740	☒	☒
36	10741	☒	☒
37	15100	✓	✓
38	155214	☒	☒
39	155304	☒	☒

9.9. TTSL GSM

SR. NO.	EMERGENCY NUMBER	Bhilwara	Sikar
1	100	✓	✓
2	101	✓	✓
3	102	✓	✓
4	104	✓	☒
5	108	✓	✓
6	138	☒	☒
7	149	☒	☒
8	181	✓	☒
9	182	✓	✓
10	1033	✓	✓
11	1037	☒	☒
12	1056	✓	✓
13	1060	☒	☒
14	1063	☒	☒
15	1064	☒	☒
16	1070	✓	✓

17	1071	✓	✓
18	1072	✓	✓
19	1073	✓	✓
20	1077	✓	✓
21	1090	✓	✓
22	1091	☒	☒
23	1097	✓	✓
24	1099	☒	☒
25	1511	☒	☒
26	1512	☒	☒
27	1514	☒	☒
28	1903	☒	☒
29	1909	✓	✓
30	1912	☒	☒
31	1916	☒	☒
32	1950	✓	✓
33	10580	☒	☒
34	10589	☒	☒
35	10740	☒	☒
36	10741	☒	☒
37	15100	✓	✓
38	155214	☒	☒
39	155304	☒	☒

9.10. VODAFONE

SR. NO.	EMERGENCY NUMBER	Bopalgarh/Piparcity	Mathania/Osian/Lohawat	Jhanwar/Jodhpur
1	100	✓	✓	✓
2	101	✓	✓	✓
3	102	✓	✓	✓
4	104	✓	✓	✓
5	108	✓	✓	✓
6	138	✓	✓	✓
7	149	☒	☒	☒
8	181	☒	☒	☒
9	182	✓	✓	✓
10	1033	✓	✓	✓
11	1037	☒	☒	☒
12	1056	☒	☒	☒
13	1060	✓	✓	✓
14	1063	✓	✓	✓

15	1064	✓	✓	✓
16	1070	✓	✓	✓
17	1071	✓	✓	✓
18	1072	☒	☒	☒
19	1073	☒	☒	☒
20	1077	☒	☒	☒
21	1090	✓	✓	✓
22	1091	☒	☒	☒
23	1097	✓	✓	✓
24	1099	☒	☒	☒
25	1511	☒	☒	☒
26	1512	✓	✓	✓
27	1514	☒	☒	☒
28	1903	✓	✓	✓
29	1909	✓	✓	✓
30	1912	☒	☒	☒
31	1916	☒	☒	☒
32	1950	✓	✓	✓
33	10580	☒	☒	☒
34	10589	☒	☒	☒
35	10740	☒	☒	☒
36	10741	☒	☒	☒
37	15100	✓	✓	✓
38	155214	☒	☒	☒
39	155304	☒	☒	☒

10. NON NETWORK PARAMETERS: DESCRIPTION AND DETAILED FINDINGS

10.1. METERING AND BILLING CREDIBILITY

The billing complaints for post-paid are calculated by averaging over one billing cycle in a quarter. For example, there are three billing cycles in a quarter, the data for each billing cycle is calculated separately and then averaged over.

The charging complaints for prepaid are calculated by taking all complaints in a quarter.

Parameter Description

All the complaints related to billing/ charging as per clause 3.7.2 of QoS regulation of 20th June, 2009 were covered. The types of billing complaints covered are listed below.

1. Payments made and not credited to the subscriber account
2. Payment made on time but late payment charge levied wrongly
3. Wrong roaming charges
4. Double charges
5. Charging for toll free services
6. Local calls charged/billed as STD/ISD or vice versa
7. Calls or messages made disputed
8. Validity related complaints
9. Credit agreed to be given in resolution of complaint, but not accounted in the bill
10. Charging for services provided without consent
11. Charging not as per tariff plans or top up vouchers/ special packs etc.
12. Overcharging or undercharging

In addition to the above, any billing complaint which leads to billing error, waiver, refund, credit, or any adjustment is also considered as valid billing complaint for calculating the number of disputed bills.

- Computational Methodology:
 - Metering and billing credibility (Post-paid)

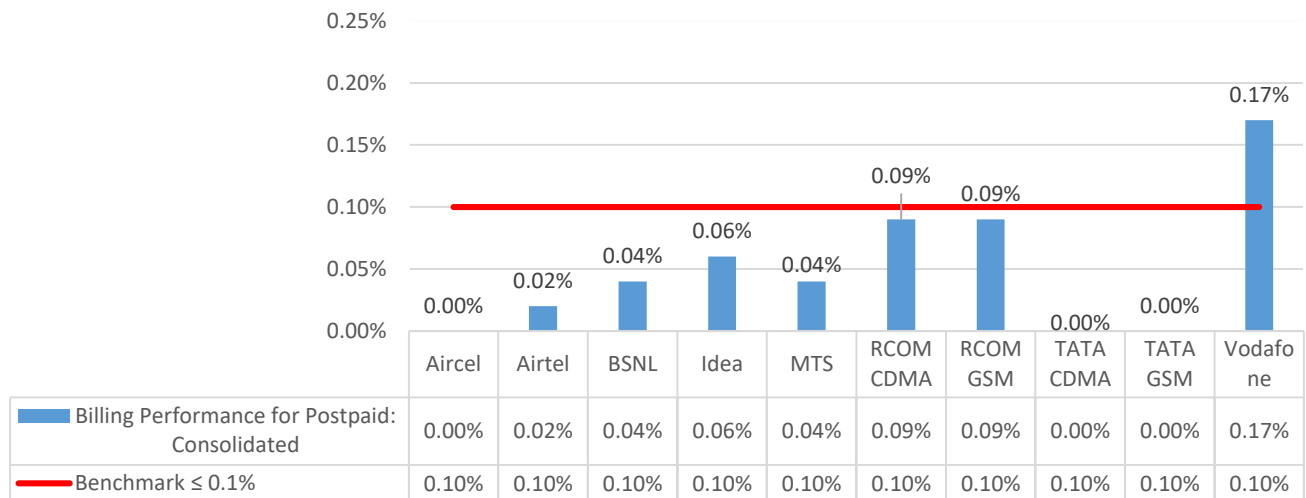
$$= \frac{\text{Total billing complaints* received during the relevant billing cycle}}{\text{Total bills generated* during the relevant billing cycle}} * 100$$
 - Operator to include all types of bills generated for customers. This would include printed bills, online bills and any other forms of bills generated
 - Billing complaints here shall include only dispute related issues (including those that may arise because of a lack of awareness at the subscribers' end). It does not include any provisional issues (such as delayed dispatch of billing statements, etc.) in which the operator has opened a ticket internally.
 - Metering and billing credibility (Prepaid)

$$= \frac{\text{Total charging complaints received during the quarter}}{\text{Total number of subscribers reported by the operator at the end of the quarter}} * 100$$
- TRAI Benchmark: $\leq 0.1\%$
- Audit Procedure:

- Audit of billing complaint details for the complaints received during the quarter and used for arriving at the benchmark reported to TRAI would be conducted
- For Post-paid, the total billing complaints would be audited by averaging over billing cycles in a quarter.
- For Prepaid, the data of total charging complaints in a quarter would be taken for the purpose of audit.

10.1.1. KEY FINDINGS: METERING AND BILLING CREDIBILITY: POST – PAID

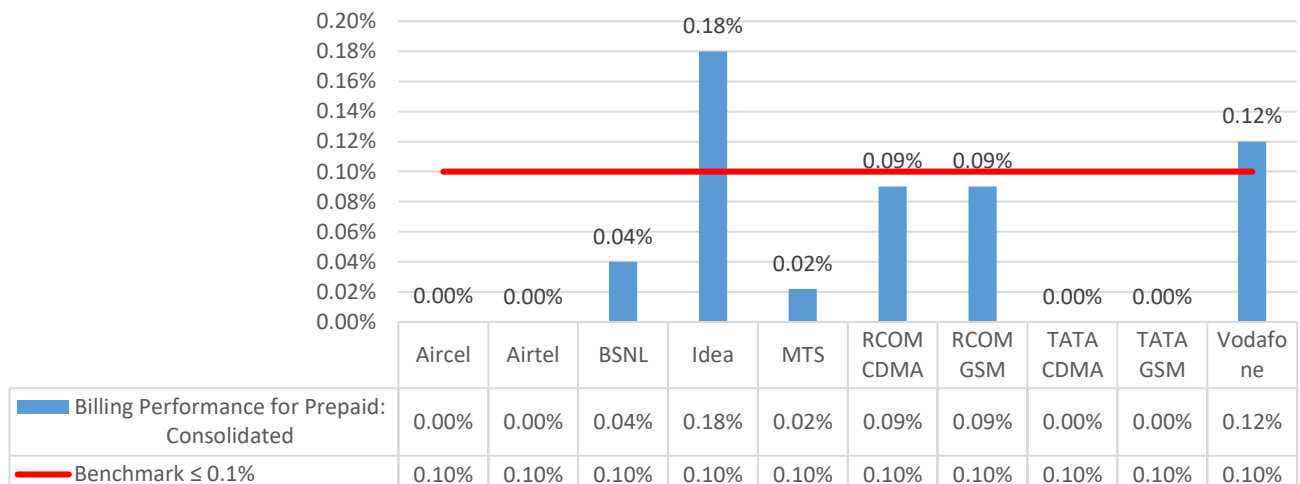
Metering and Billing Credibility: Postpaid



- Vodafone has a parameter value of **0.17%** and failed to meet the benchmark for Metering and Billing credibility (Post-paid) as it is pre-defined at $\leq 0.1\%$.

10.1.2. KEY FINDINGS: METERING AND BILLING CREDIBILITY: PREPAID

Metering and Billing Credibility: Prepaid



- Idea has a parameter value of **0.18%** and failed to meet the benchmark for Metering and Billing credibility (Pre-paid) as it is pre-defined at $\leq 0.1\%$

10.2. RESOLUTION OF BILLING COMPLAINTS

Calculation of Percentage resolution of billing complaints: The calculation methodology (given below) as per QoS regulations 2009 (7 of 2009) was followed to calculate resolution of billing complaints.

Resolution of billing complaints within 4 weeks:

%age of billing complaints (for post-paid customers)/ charging, credit & validity (for pre-paid customers) resolved within 4 weeks =

$$\frac{\text{number of billing complaints for post-paid customers/charging, credit/ validity complaints for pre-paid customers resolved within 4 weeks during the quarter}}{\text{number of billing/charging, credit / validity complaints received during the quarter}} \times 100$$

Resolution of billing complaints within 6 weeks:

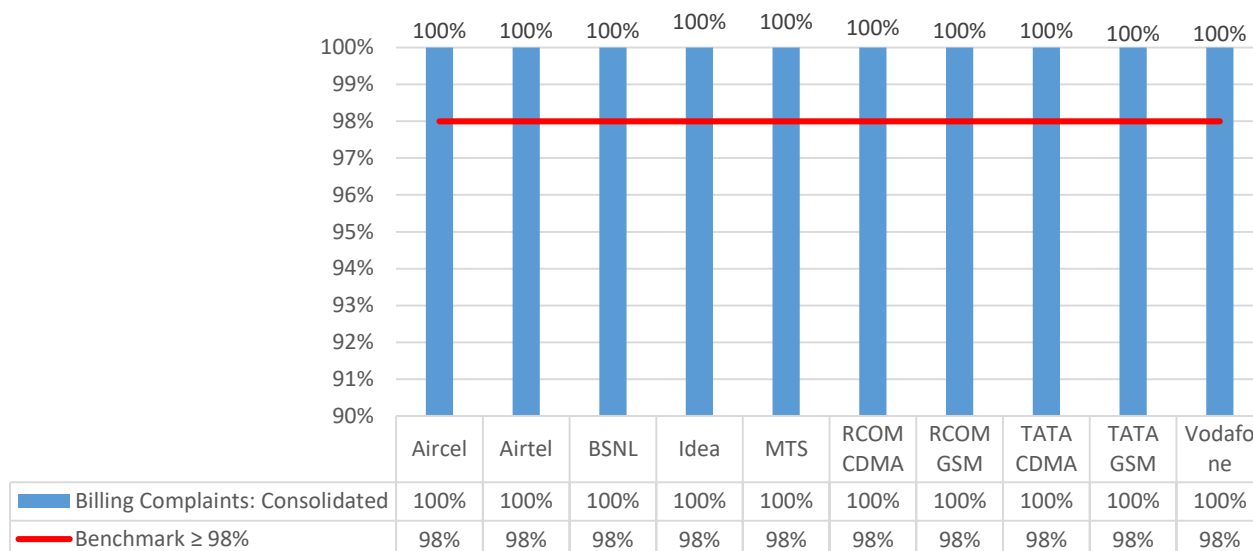
%age of billing complaints (for post-paid customers)/ charging, credit & validity (for pre-paid customers) resolved within 6 weeks =

$$\frac{\text{number of billing complaints for post-paid customers/charging, credit/ validity complaints for pre-paid customers resolved within 6 weeks during the quarter}}{\text{number of billing/charging, credit / validity complaints received during the quarter}} \times 100$$

- Billing complaints here shall include only dispute related issues (including those that may arise because of a lack of awareness at the subscribers' end). It does not include any provisional issues (such as delayed dispatch of billing statements, etc.) in which the operator has opened a ticket internally. Complaints raised by the consumers to operator are only considered as part of the calculation.
- Date of resolution in this case would refer to the date when a communication has taken place from the operator's end to inform the complainant about the final resolution of the issue / dispute.
- Benchmark: 98% complaints resolved within 4 weeks, 100% within 6 weeks.

10.2.1. KEY FINDINGS: BILLING COMPLAINTS RESOLUTION WITHIN 4 WEEKS

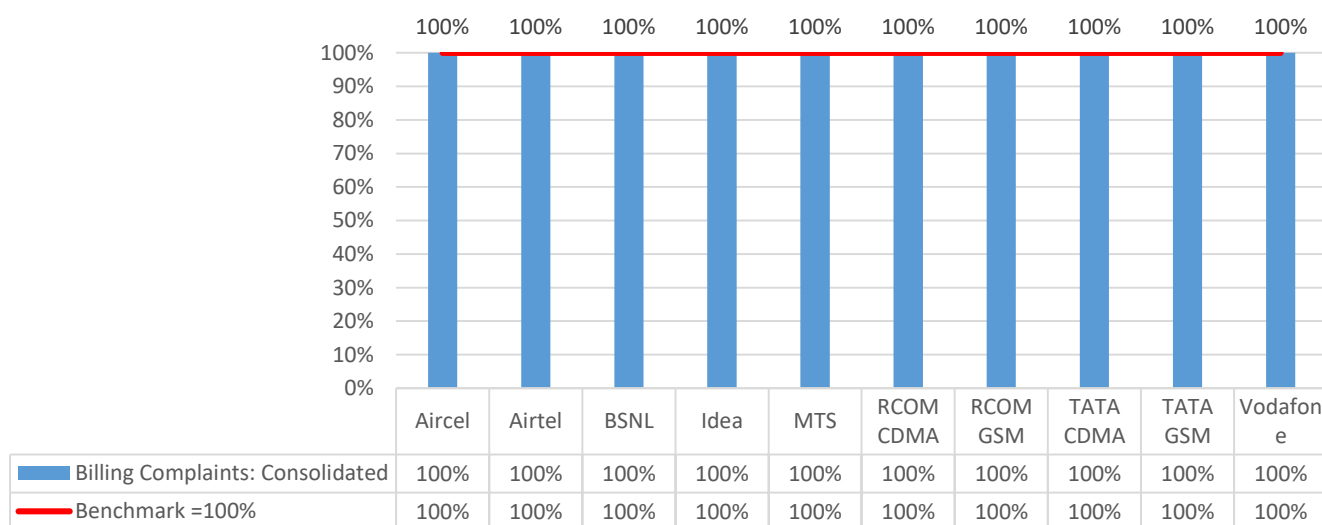
Complaints resolved within 4 weeks



- It is clear from the analysis that all the operators are within benchmark.

10.2.2. KEY FINDINGS: BILLING COMPLAINTS RESOLUTION WITHIN 6 WEEKS

Complaints resolved within 6 weeks



- It is clear from the analysis that all the operators are within benchmark.

10.3. PERIOD OF APPLYING CREDIT / WAIVER

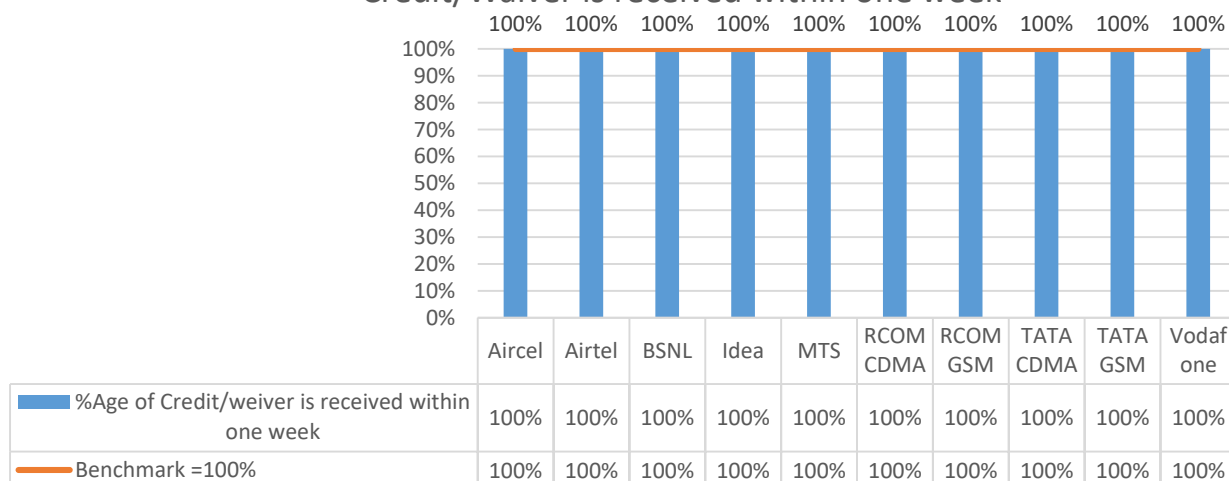
- Computational Methodology:

$$\text{Period of applying credit waiver} = \frac{\text{number of cases where credit waiver is applied within 7 days}}{\text{total number of cases eligible for credit waiver}} * 100$$

- TRAI Benchmark: Period of applying credit waiver within 7 days: 100%
- Audit Procedure:
 - Operator to provide details of:-
 - List of all eligible cases along with
 - Date of applying credit waiver to all the eligible cases
 - Date of resolution of complaint for all eligible cases

10.3.1. KEY FINDINGS

Credit/Waiver is received within one week



- It is clear from the analysis that all the operators are within benchmark.

10.4. CALL CENTRE PERFORMANCE: IVR

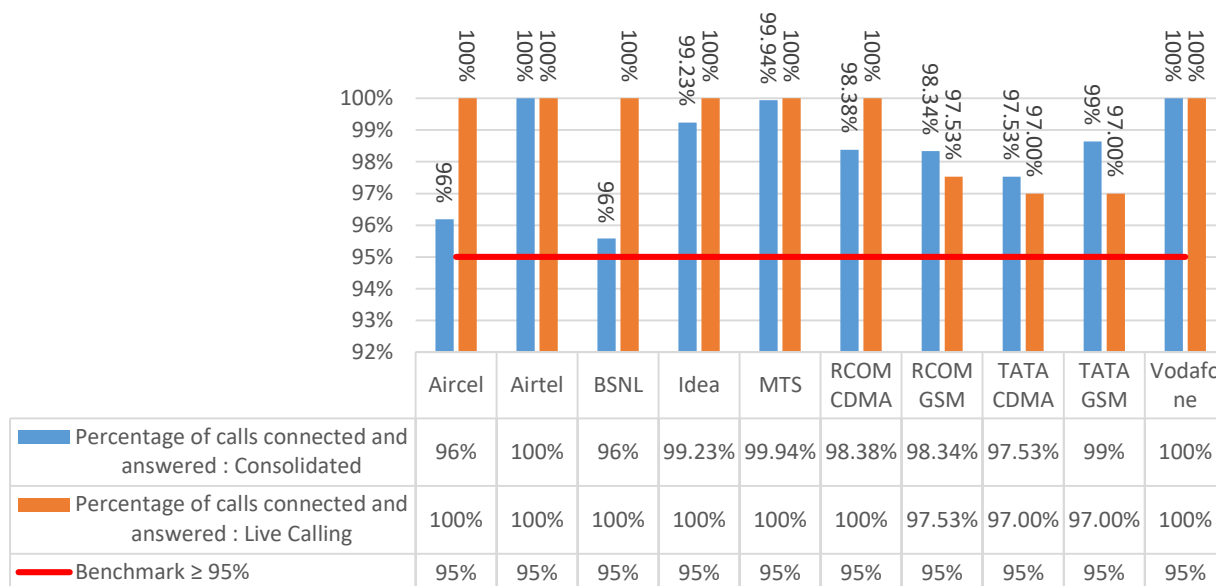
- Computational Methodology:

$$\text{Call centre performance IVR} = \frac{\text{Number of calls connected and answered by IVR}}{\text{All calls attempted to IVR}} * 100$$

- TRAI Benchmark: $\geq 95\%$
- Audit Procedure:
 - Operators provide details of the following from their central call centre/ customer service database:
 - Total calls connected and answered by IVR
 - Total calls attempted to IVR
 - Also live calling is done to test the calls connected and answered by IVR

10.4.1. KEY FINDINGS

Call Centre Performance: IVR



- It is clear from the analysis that all operators are within benchmark.

10.5. CALL CENTER PERFORMANCE: VOICE TO VOICE

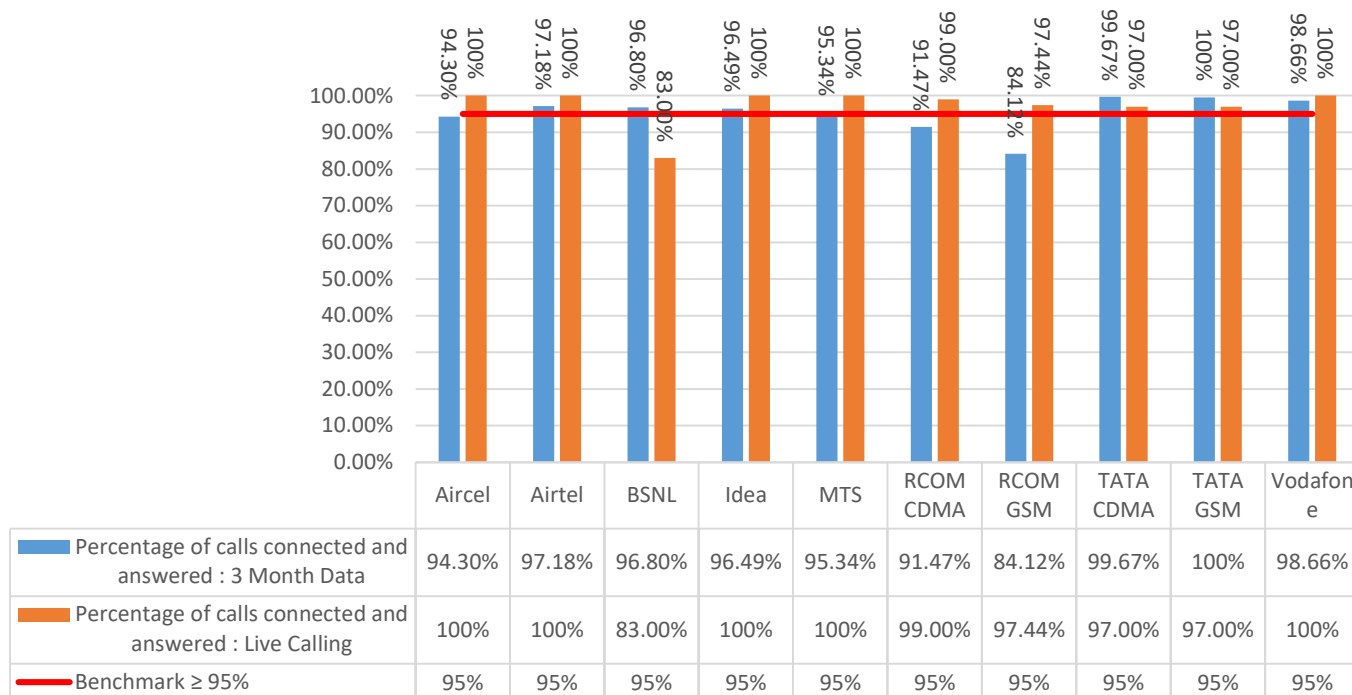
- Computational Methodology:

$$\text{Call centre performance Voice to Voice} = \frac{\text{Number of calls answered by operator within 90 seconds}}{\text{All calls attempted to connect to the operator}} * 100$$

- Audit Procedure:
 - Operators provide details of the following from their central call centre/ customer service database:
 - Total calls connected and answered by operator within 90 seconds
 - Total calls attempted to connect to the operator
 - Also live calling was done to test the calls answered within 90 seconds by the operator
- Benchmark: 95% calls to be answered within 90 seconds.

10.5.1. KEY FINDINGS

Call Centre Performance: Voice to Voice



- BSNL has a parameter value of **83.00%** failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%
- RCOM GSM has a parameter value of **84.12%** failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%
- RCOM CDMA has a parameter value of **91.47%** failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%

10.6. TERMINATION OR CLOSURE OF SERVICE

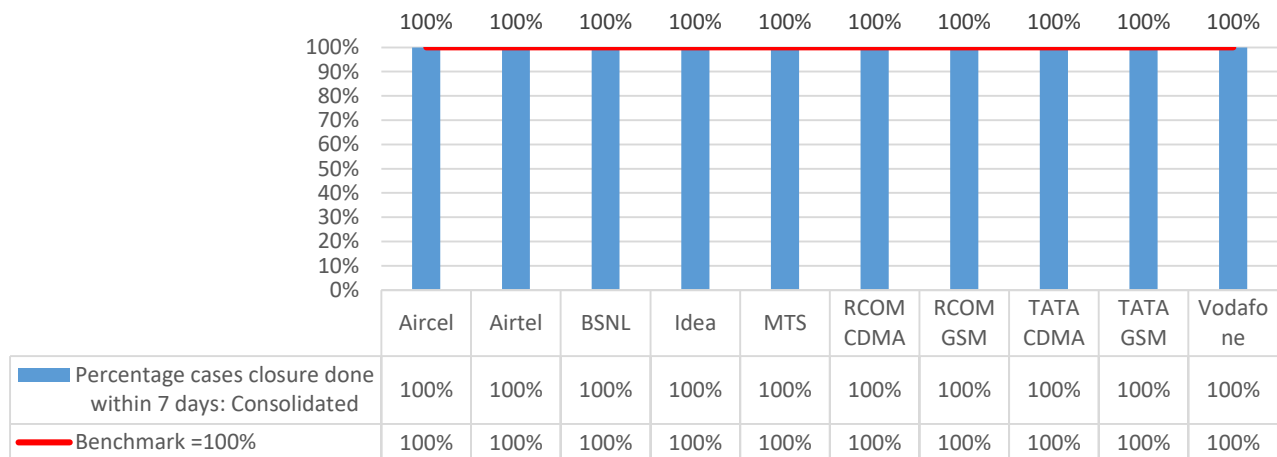
- Computational Methodology:

$$\text{Time taken for closure of service} = \frac{\text{number of closures done within 7 days}}{\text{total number of closure requests}} * 100$$

- TRAI Benchmark: Termination/Closure of Service: <=7 days
- Audit Procedure:
 - Operator provide details of the following from their central billing/CS database:
 - Date of lodging the closure request (all requests in given period)
 - Date of closure of service

10.6.1. KEY FINDINGS

Termination/ Closure of service within 7 days



- It is clear from the analysis that all the operators are within benchmark.

10.7. REFUND OF DEPOSIT AFTER CLOSURE

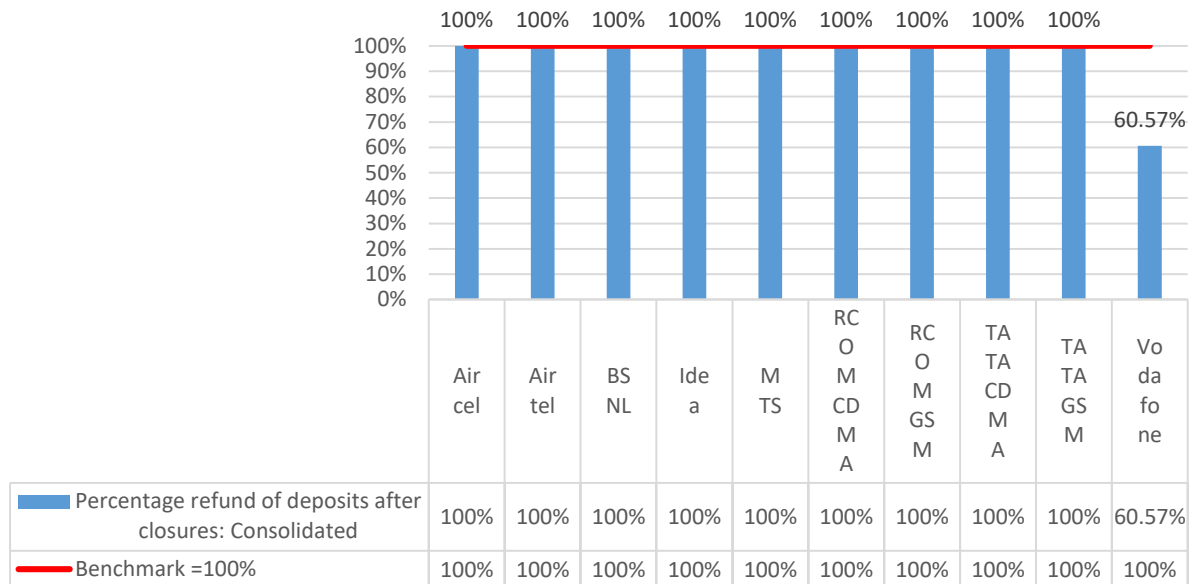
- Computational Methodology:

$$\text{Time taken for refund for deposit after closures} = \frac{\text{number of cases of refund after closure done within 60 days}}{\text{total number of cases of refund after closure}} * 100$$

- Any case where the operators need to return the amount back to consumers post closure of service in form of cheque/cash is considered to be refund.
- TRAI Benchmark: Time taken for refund for deposit after closures: 100% within 60 days
- Audit Procedure:
 - Operator provide details of the following from their central billing/refund database:
 - Dates of completion of all 'closure requests' resulting in requirement of a refund by the operator.
 - Dates of refund pertaining to all closure request received during relevant quarter

10.7.1. KEY FINDINGS

Refund of deposit after closure



- Vodafone has a parameter value of **60.57%** and failed to meet the benchmark for Time taken for refund of deposits after closures (Cleared over a period of <60 days) as it is pre-defined at =100%.

11. CRITICAL FINDINGS

2G VOICE PMR DATA: OCTOBER

- Aircel has parameter value of **5.53%** and failed to meet the benchmark for No. of BTSs having accumulated downtime of >24 hours in a month as it is pre-defined at $\leq 2\%$
- TATA CDMA has a parameter value of **5.67%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.98%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE PMR DATA: NOVEMBER

- TATA CDMA has a parameter value of **3.23%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE PMR DATA: DECEMBER

- TATA CDMA has a parameter value of **3.07%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE PMR DATA: CONSOLIDATED

- TATA CDMA has a parameter value of **3.99%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE 3 DAYS LIVE DATA: OCTOBER

- TATA CDMA has a parameter value of **5.66%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.54%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE 3 DAYS LIVE DATA: NOVEMBER

- TATA CDMA has a parameter value of **3.35%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.94%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE 3 DAYS LIVE DATA: DECEMBER

- TATA CDMA has a parameter value of **3.10%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

2G VOICE 3 DAYS LIVE DATA: CONSOLIDATED

- TATA CDMA has a parameter value of **4.04%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$
- TATA GSM has a parameter value of **3.44%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at $\leq 3\%$

3G VOICE PMR: CONSOLIDATED

- Vodafone has a parameter value of **3.30%** and failed to meet the benchmark for Worst affected cells having more than 3% Circuit Switched Voice Drop Rate as it is pre-defined at $\leq 3\%$.

3G VOICE PMR: NOVEMBER

- Vodafone has a parameter value of **4.13%** and failed to meet the benchmark for Worst affected cells having more than 3% Circuit Switched Voice Drop Rate as it is pre-defined at $\leq 3\%$.

Billing and Customer Care

- Aircel has a parameter value of **94.30%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$
- Idea has a parameter value of **0.18%** and failed to meet the benchmark for Metering and Billing credibility (Pre-paid) as it is pre-defined at $\leq 0.1\%$
- RCOM CDMA has a parameter value of **91.47%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$.
- RCOM GSM has a parameter value of **84.12%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$.
- Vodafone has a parameter value of **0.17%** and failed to meet the benchmark for Metering and Billing credibility (Post-paid) as it is pre-defined at $\leq 0.1\%$.
- Vodafone has a parameter value of **0.12%** and failed to meet the benchmark for Metering and Billing credibility (Prepaid) as it is pre-defined at $\leq 0.1\%$.
- Vodafone has a parameter value of **60.57%** and failed to meet the benchmark for Time taken for refund of deposits after closures (Cleared over a period of <60 days) as it is pre-defined at $=100\%$.

Live Calling Data: Consolidated

- BSNL has a parameter value of **83.00%** failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$

3 Days Live Call Centre Data

- Vodafone has a parameter value of **94.05%** failed to meet the benchmark for % age calls answered by the operator within 90 seconds as it is pre-defined at $\geq 95\%$.
- Vodafone has a parameter value of **92.46%** failed to meet the benchmark for % age calls answered by the operator within 90 seconds as it is pre-defined at $\geq 95\%$.

12. PMR COMPARISON (AGENCY VS TSP)

12.1. Network Parameters

Name of Service Provider	Network Availability				Connection Establishment (Accessibility)						Connection Maintenance (Retainability)					
	Sum of downtime of BTSs in a month in hrs. in the licensed service area		No. of BTSs having accumulated downtime of >24 hours in a month		Call Set-up Success Rate (Within Licensee own network)		SDDCH/Paging chl. Congestion		TCH Congestion		Call Drop Rate (%age)		Worst Affected call having more than 3% TCH drop		%age of connection with good voice quality	
Benchmark	≤ 2%		≤ 2%		≥ 95%		≤ 1%		≤ 2%		≤ 2%		≤ 3%		≥ 95%	
	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP
Aircel	1.89%	0.11%	0.27%	0.27%	97.51%	97.51%	0.26%	0.26%	0.65%	0.65%	0.66%	0.66%	2.71%	2.71%	96.89%	96.89%
Airtel	0.10%	0.10%	0.13%	0.13%	97.85%	97.86%	0.47%	0.47%	1.19%	1.19%	0.64%	0.64%	0.68%	0.66%	99.20%	99.20%
BSNL	1.46%	1.46%	1.73%	1.73%	97.50%	98.56%	0.40%	0.40%	1.22%	1.22%	1.45%	1.45%	1.81%	1.72%	98.57%	98.57%
Idea	0.04%	0.04%	0.04%	0.04%	99.42%	99.42%	0.23%	0.23%	0.30%	0.30%	0.71%	0.71%	2.07%	2.07%	96.56%	97.51%
MTS	0.05%	0.07%	0.00%	0.00%	99.18%	99.17%	NA	0.00%	0.07%	0.08%	0.36%	0.36%	0.50%	0.50%	99.22%	99.22%
RCOM CDMA	0.04%	0.04%	0.14%	0.14%	97.80%	97.80%	NA	0.00%	0.96%	0.95%	0.13%	0.13%	0.89%	0.88%	97.94%	98.60%
RCOM GSM	0.06%	0.07%	0.60%	0.37%	98.81%	98.81%	0.07%	0.07%	0.17%	0.17%	0.11%	0.11%	0.74%	0.74%	99.39%	99.40%
TATA CDMA	0.11%	0.11%	0.00%	0.00%	98.57%	98.57%	NA	0.00%	0.64%	0.64%	0.33%	0.33%	3.99%	3.99%	98.92%	98.92%
TATA GSM	0.12%	0.12%	0.05%	0.00%	98.34%	98.34%	0.05%	0.05%	0.07%	0.07%	0.59%	0.59%	3.37%	3.37%	98.80%	98.80%
Vodafone	0.06%	0.06%	0.17%	0.24%	99.65%	99.65%	0.18%	0.18%	0.35%	0.35%	0.69%	0.69%	2.42%	2.42%	96.76%	96.76%

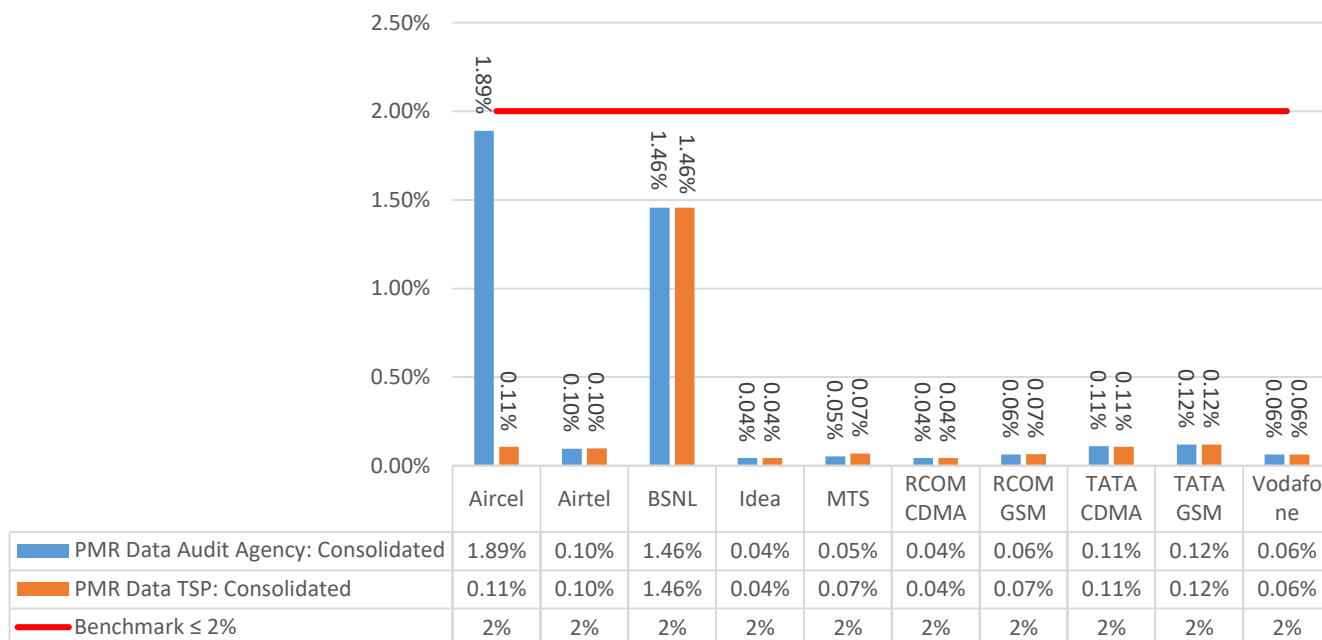
- **For each instance of “DNA (Data Not Available)”, please refer the respective hard copy of audit report(s).

12.2. CSD Parameters

Name of Service Provider	Metering and Billing credibility				Billing Complaints						Termination & Closures		Time taken for refund of deposits after closures: Benchmark		Customer Care			
	Postpaid Subscribers		Prepaid Subscribers		%age complaints resolved within 4 weeks		%age complaints resolved within 6 weeks		%age of credit/weiver is received within one week		% of Termination/ Closure of service within 7 days (100 %)		Cleared over a period of <60 days (100%)		%age of calls answered by the IVR		%age of call answered by the operators (voice to voice) within 90 seconds	
Benchmark	≤ 0.1%		≤ 0.1%		≥ 98%		= 100%		= 100%		= 100%		= 100%		≥ 95%		≥ 95%	
	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP
Aircel	0.00%	0.00%	0.00%	0.00%	100.00%	100%	100.00%	100%	100.00%	100%	100.00%	100%	100.00%	100.00%	96.19%	96.19%	94.30%	94.30%
Airtel	0.02%	0.02%	0.00%	0.00%	100%	99.69%	100%	100%	100%	100%	100%	100%	100%	100.00%	100%	100%	97.18%	97.18%
BSNL	0.04%	0.04%	0.04%	0.04%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	95.58%	95.00%	96.80%	96.80%
Idea	0.06%	0.06%	0.18%	0.18%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	99.23%	99.23%	96.49%	96.49%
MTS	0.04%	0.00%	0.02%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	99.94%	99.94%	95.34%	97.09%
RCOM CDMA	0.09%	0.09%	0.09%	0.09%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.38%	98.38%	91.47%	91.47%
RCOM GSM	0.09%	0.09%	0.09%	0.09%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.34%	98.34%	84.12%	84.12%
TATA CDMA	0.00%	0.00%	0.00%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	97.53%	97.49%	99.67%	99.64%
TATA GSM	0.00%	0.00%	0.00%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.64%	98.56%	99.56%	98.34%
Vodafone	0.17%	0.18%	0.12%	0.12%	100%	98.03%	100%	100%	100%	100%	100%	100%	60.57%	100.00%	100%	100%	98.66%	98.66%

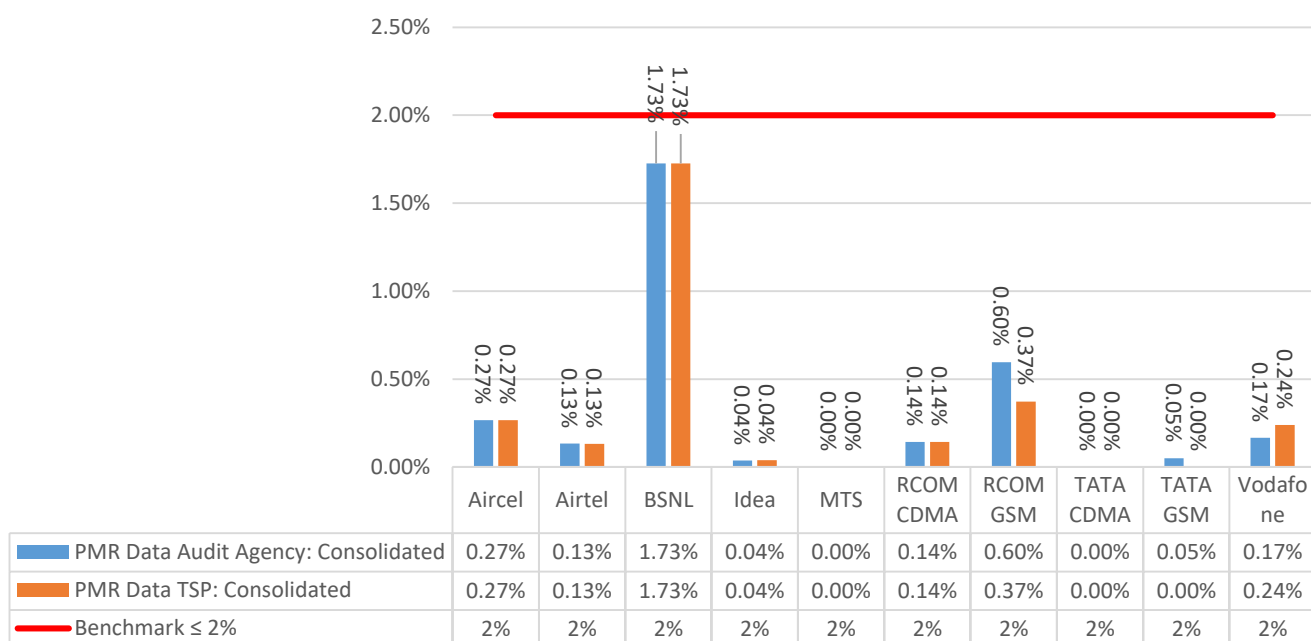
12.3. Key findings: BTS Accumulated Downtime

BTSs Accumulated downtime (not available for service) (%age)



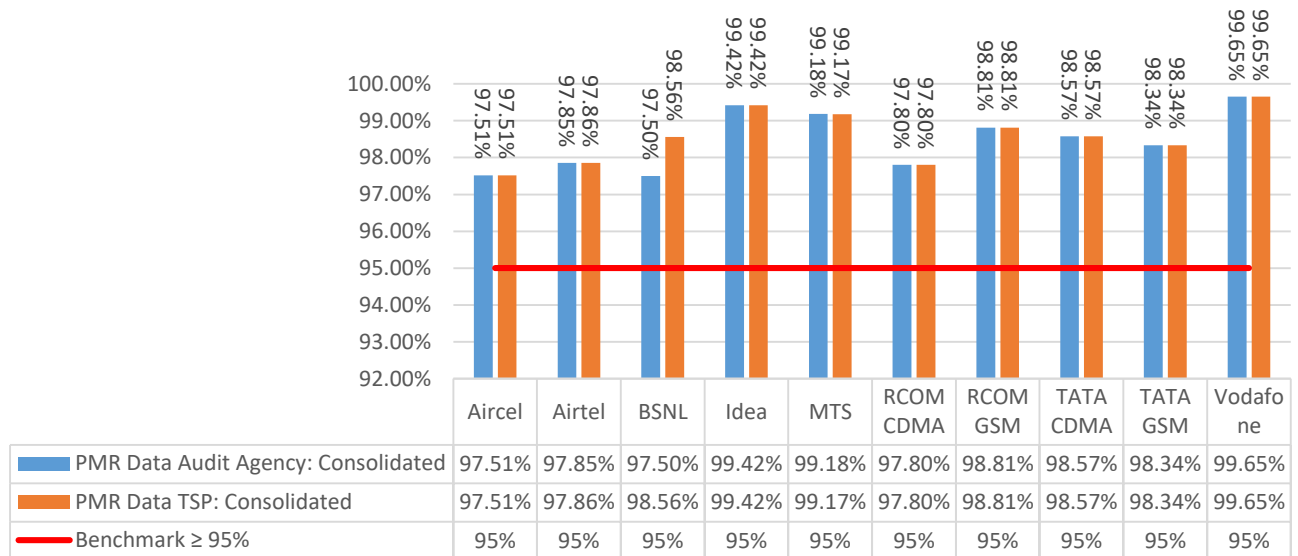
12.4. Key findings: Worst Affected BTSs due to Downtime

Worst affected BTSs due to downtime (%age)



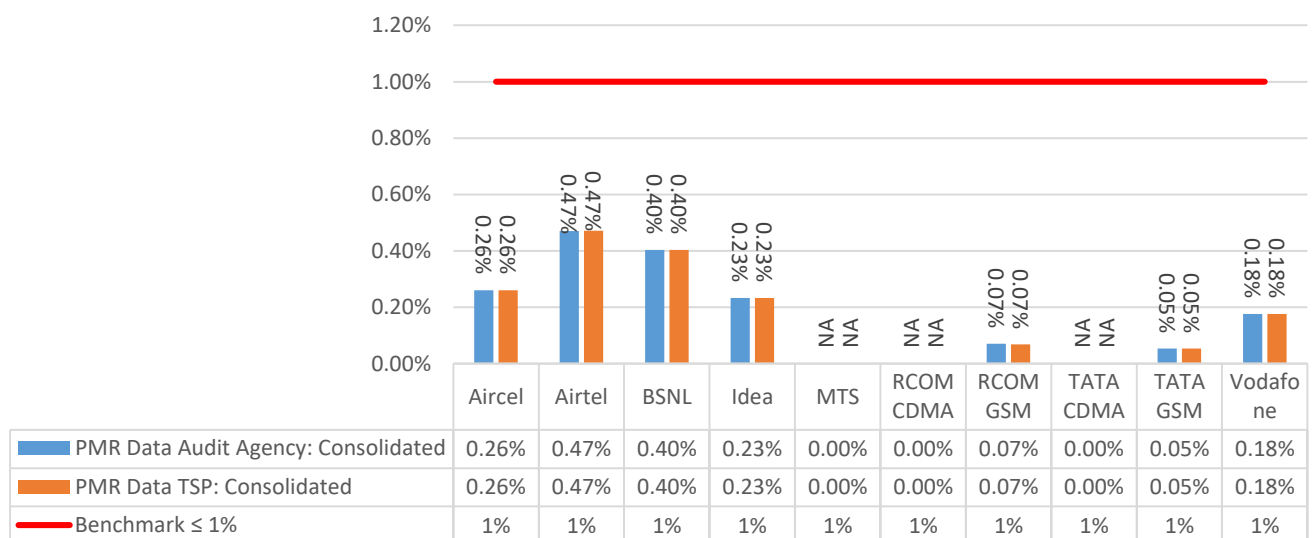
12.5. Key findings: Call Setup Success Rate

Call Set-up Success Rate (within licensee's own network)

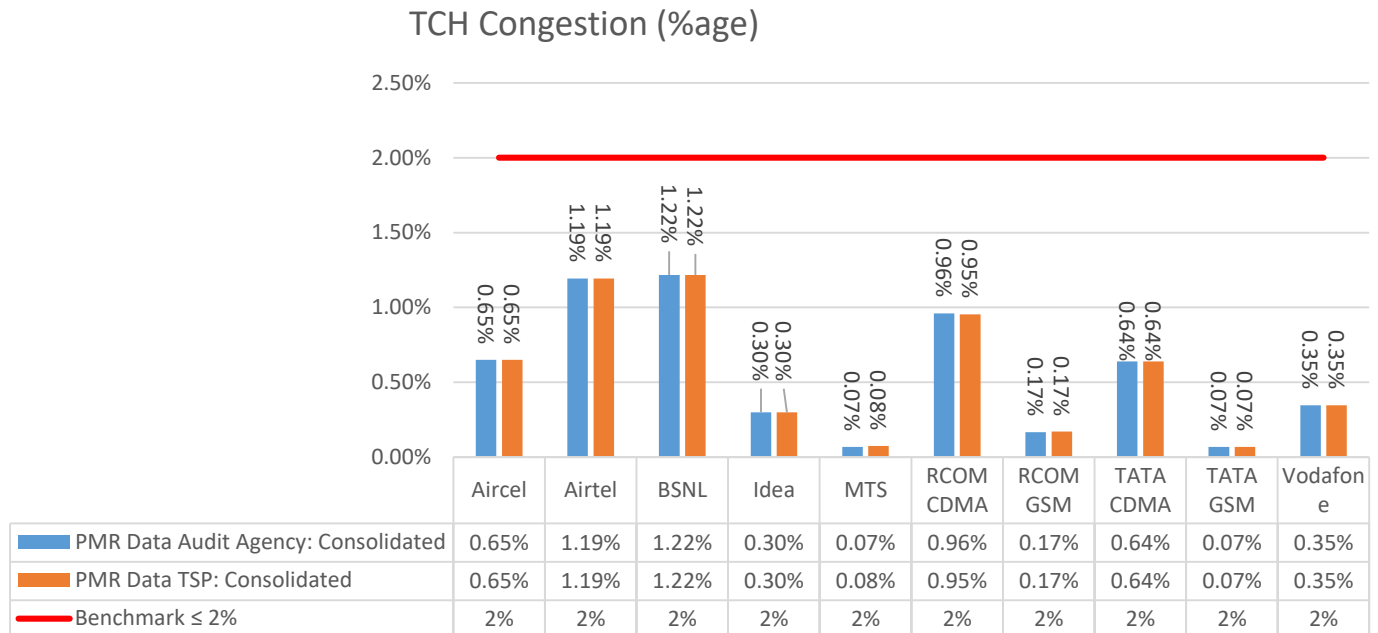


12.6. Key findings: SDCCH / Paging Chl. Congestion

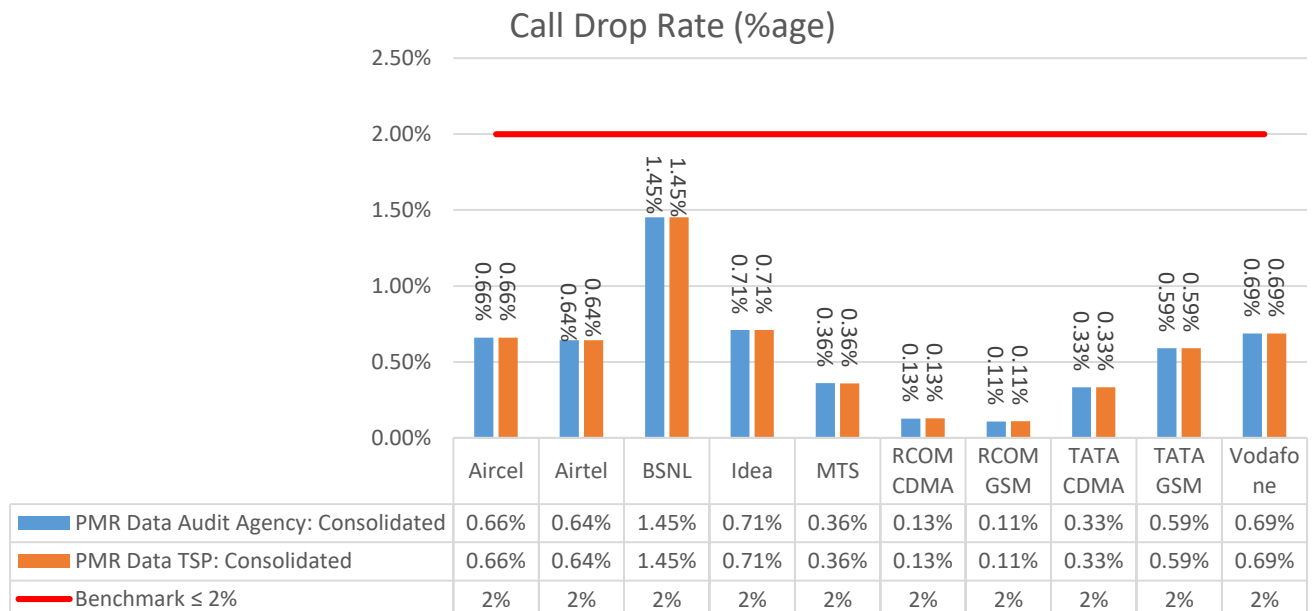
SDCCH/ Paging Chl. Congestion(%age)



12.7. Key findings: TCH Congestion

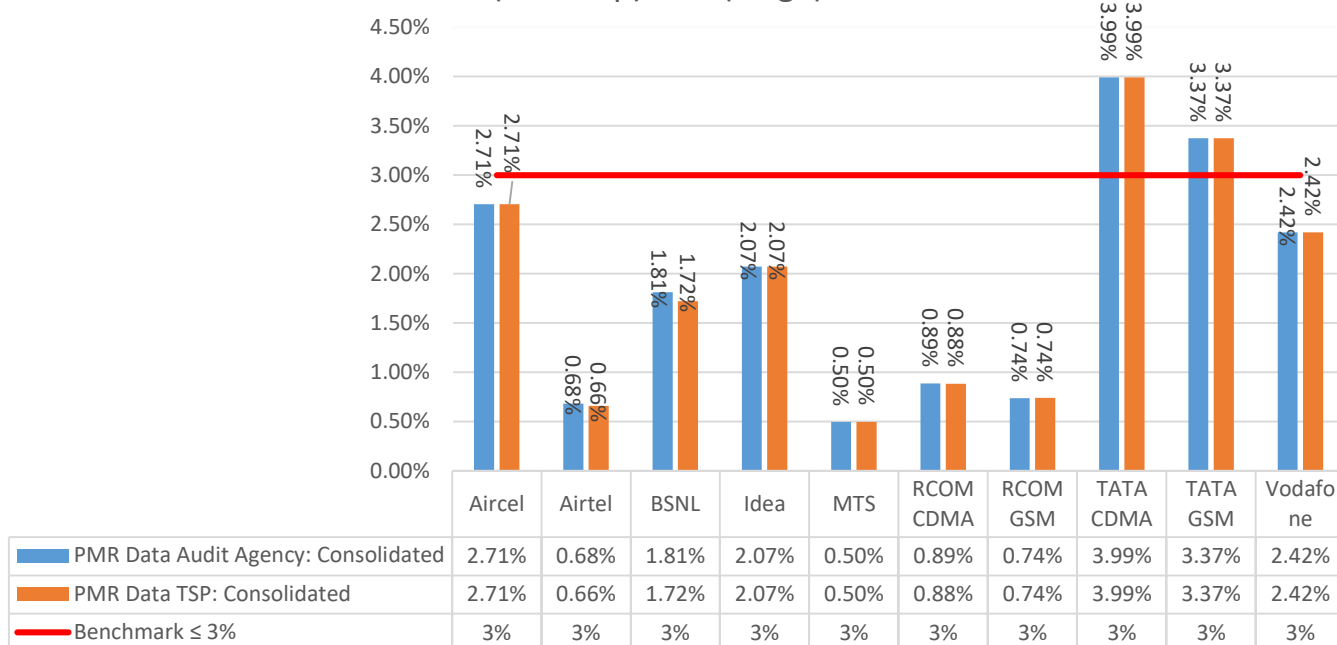


12.8. Key findings: Call Drop Rate



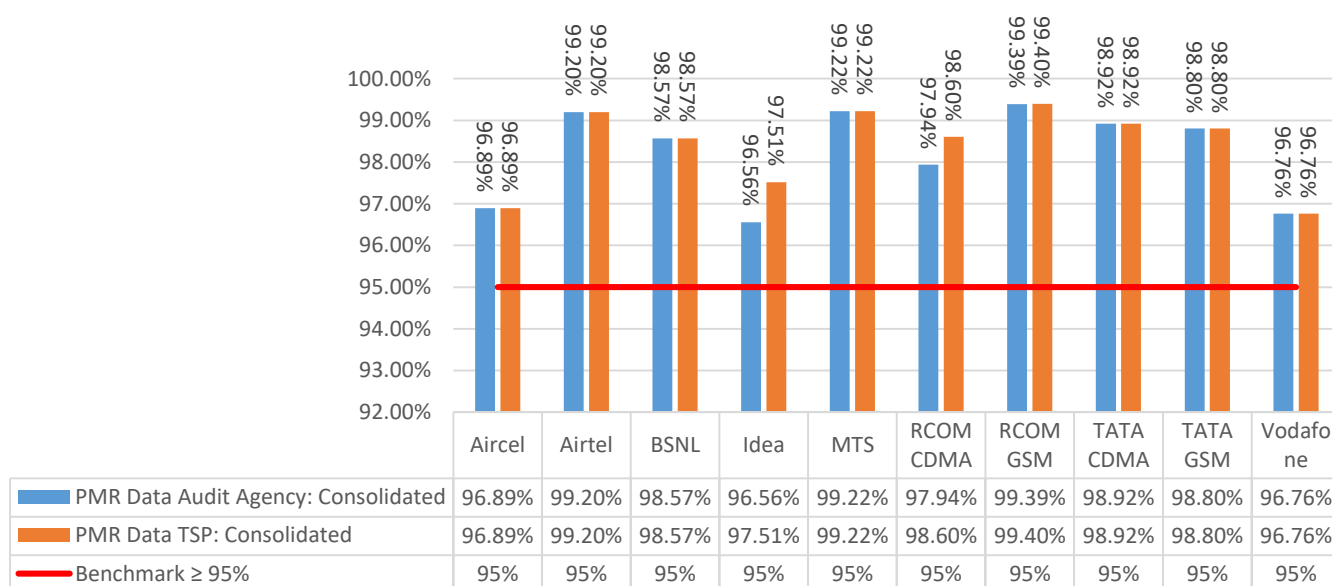
12.9. Key findings: Worst effected cell more than 3% TCH drop

Worst affected cells having more than 3% TCH drop
(call drop) rate (%age)



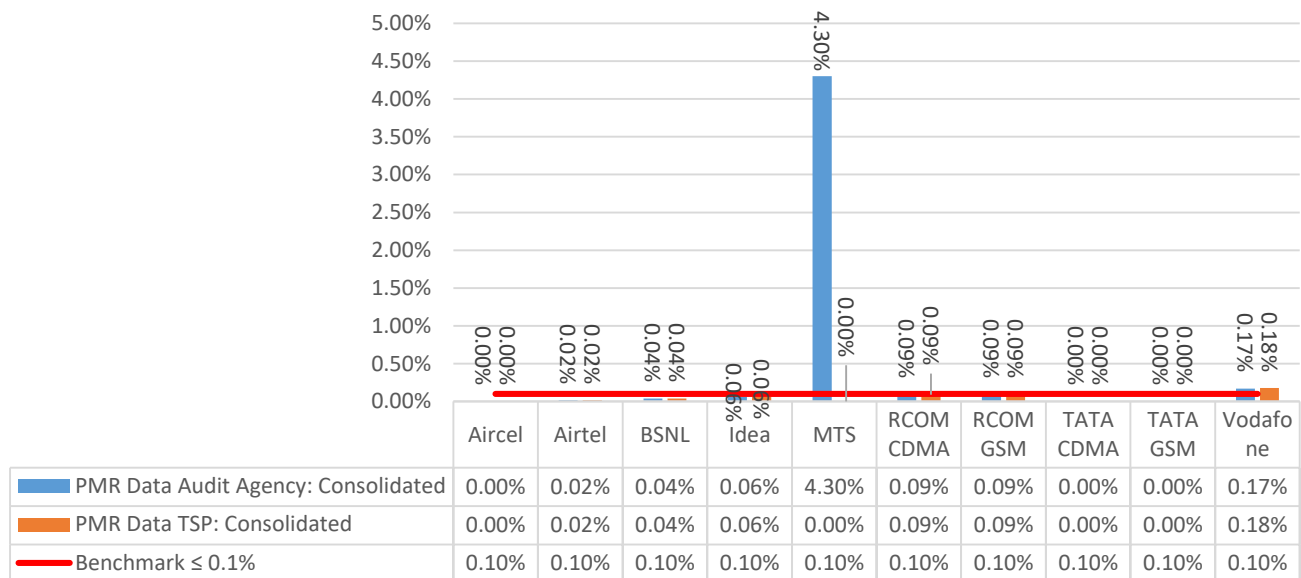
12.10. Key findings: Connection with good voice quality

Connection with good voice quality



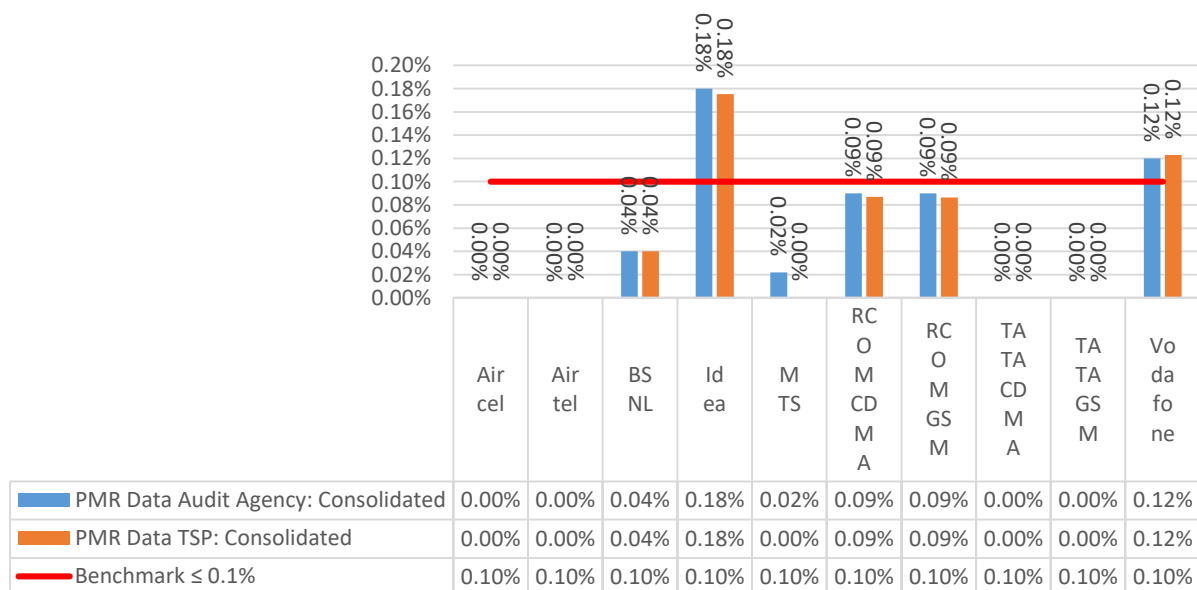
12.11. Key findings: Metering and Billing Credibility: Post Paid

Metering and billing credibility - Post paid



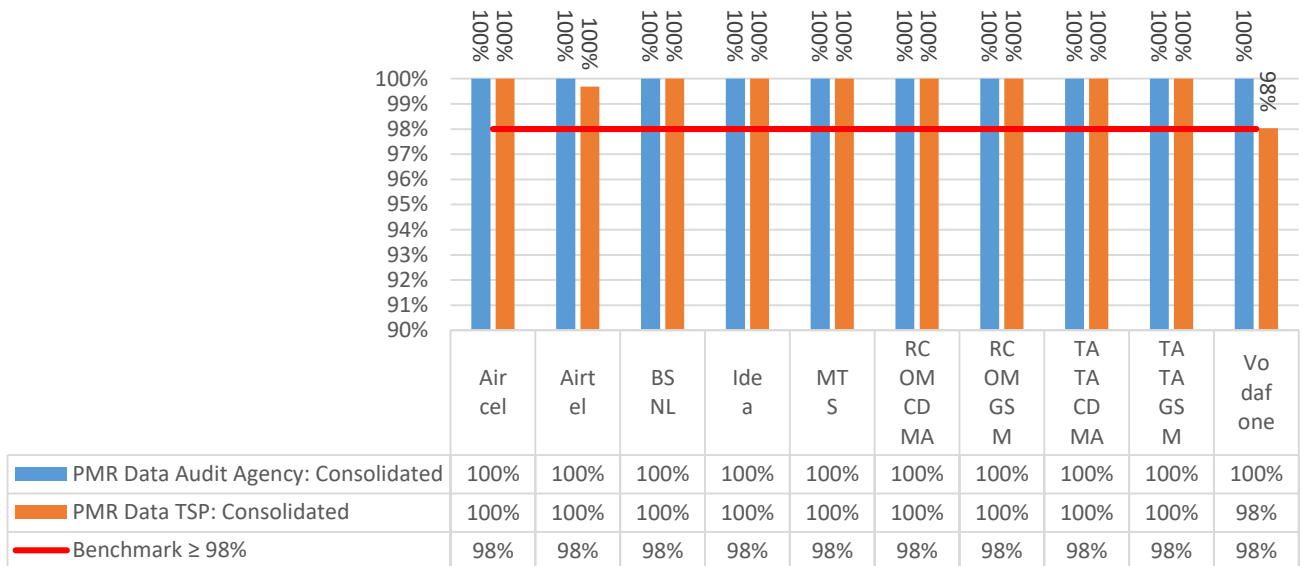
12.12. Key findings: Metering and Billing Credibility: Prepaid

Metering and billing credibility - Pre paid



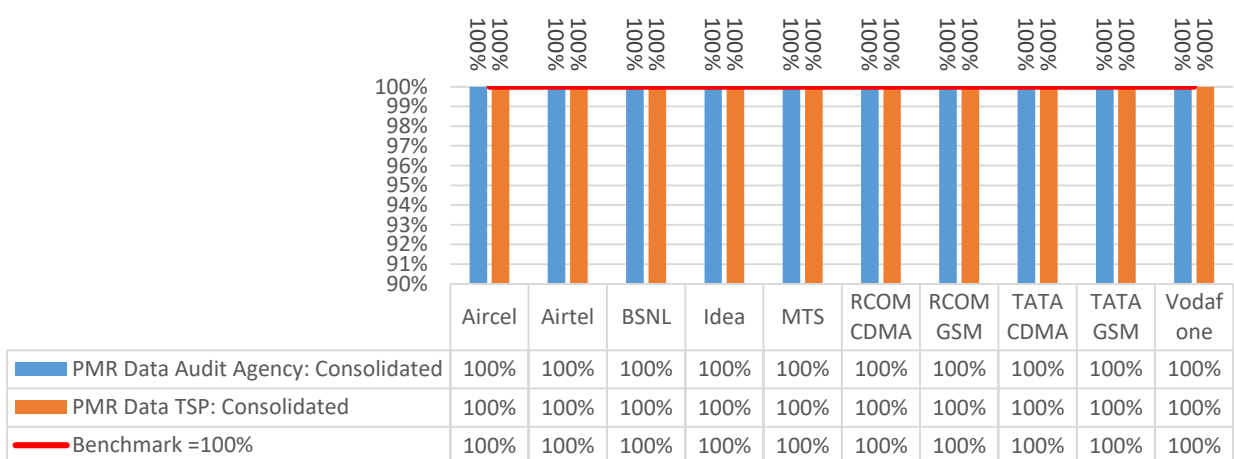
12.13. Key findings: Resolution of billing/charging complaints within 4 weeks

Resolution of billing/charging complaints within 4 weeks



12.14. Key findings: Resolution of billing/charging complaints within 6 weeks

Resolution of billing/charging complaints within 6 weeks



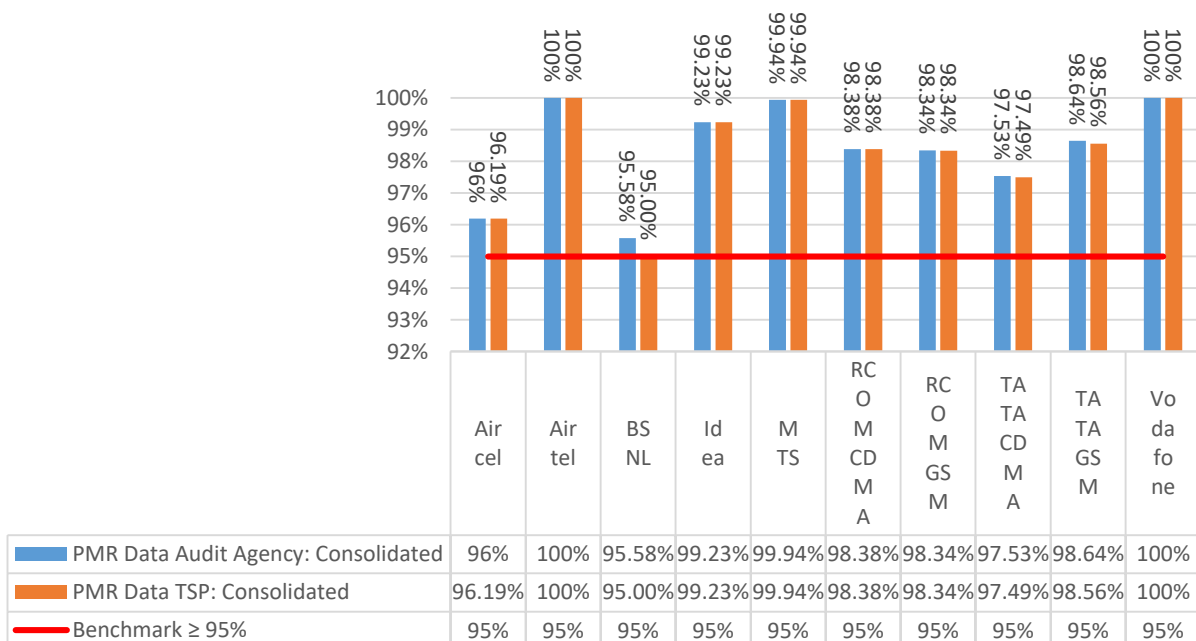
12.15. Key findings: Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints

Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints



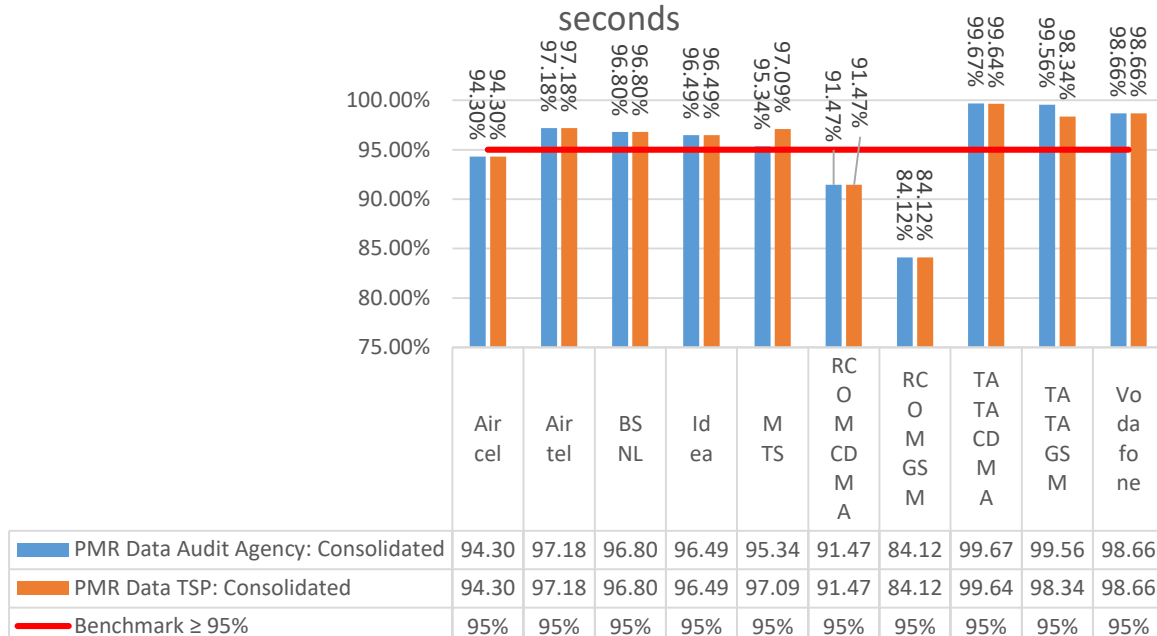
12.16. Key findings: Accessibility of call centre/ customer care

Accessibility of call centre/ customer care



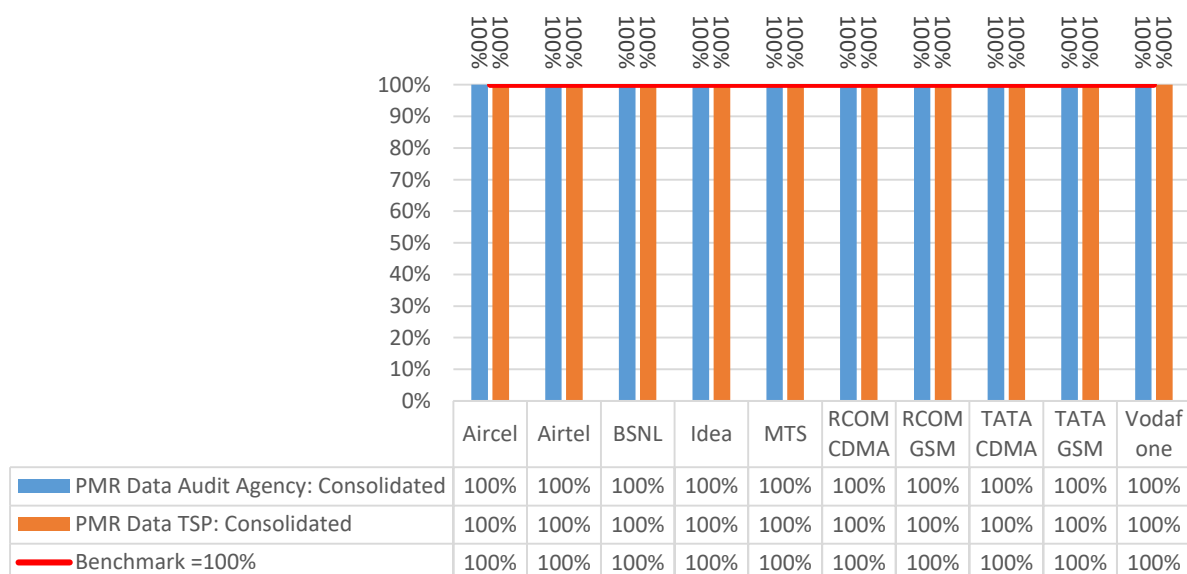
12.17. Key findings: Percentage of calls answered by the operators (voice to voice) within 90 seconds

Percentage of calls answered by the operators (voice to voice) within 90 seconds



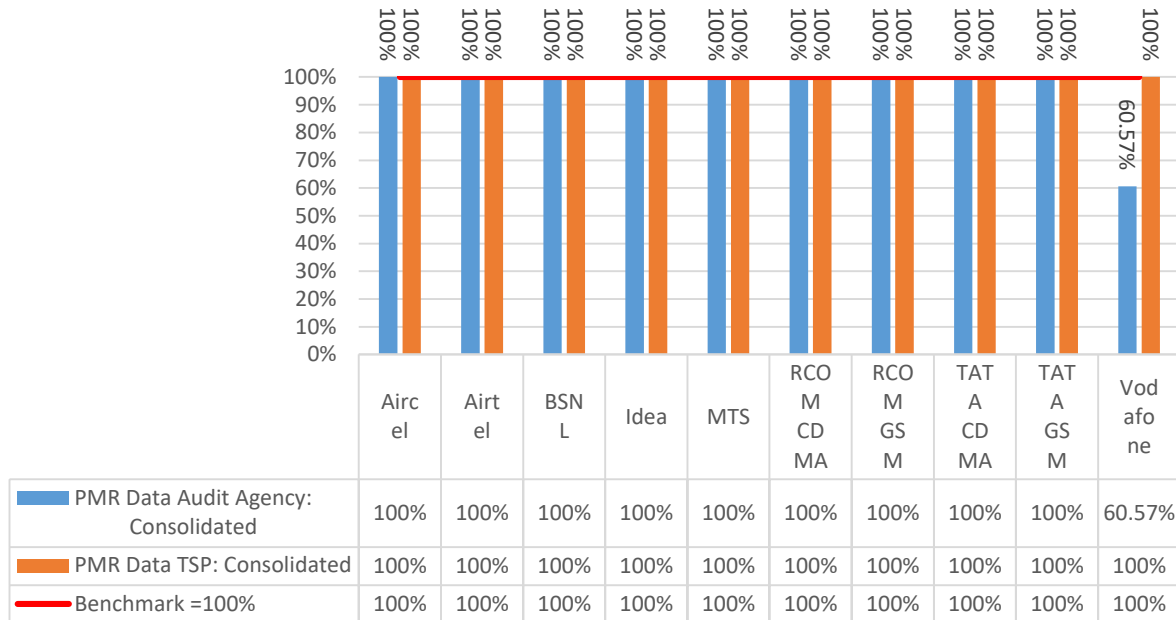
12.18. Key findings: Percentage requests for Termination / Closure of service complied within 7 days

%Age Requests for Termination / Closure of service complied within 7 days



12.19. Key findings: Time taken for refund of deposits after closures within 60 days

Time taken for refund of deposits after closures within 60 days



13. OPERATOR ASSISTED DRIVE TEST

The drive test was conducted simultaneously for all the operators present in the Rajasthan circle. As per the new directive given by TRAI headquarters, drive test for the month of October, November and December, 2015 were conducted at a SSA level. Drive test was conducted for three days in each SSA and the selection of routes ensured that the maximum towns, villages, highways are covered as part of drive test. The routes were selected on basis of the complaints received from the customers. The auditors were present in vehicles of every operator. The holding period for all test calls was 120 seconds and the gap between calls was 10 seconds.

For measuring voice quality RxQual samples for GSM operators and Frame Error Rate (FERs) for CDMA service providers were measured. RxQual greater than 5 meant that the sample was not of appropriate voice quality and for CDMA operators FERs of more than 4 were considered bad. Call drops were measured by the number of calls that were dropped to the total number of calls established during the drive test. Similarly CSSR was measured as the ratio of total calls established to the total call attempts made. Signal strength was measured in Dbm with strength > -75dbm for indoor, -85 dbm for in-vehicle and > -95 dbm outdoor routes. Below is the schedule and operators involved in the drive test for the Rajasthan circle.

13.1. NOVEMBER: AJMER SSA

Month	Name of SSA covered	Drive Test Schedule
November 2015	Ajmer	November 25, 2015 to November 27, 2015

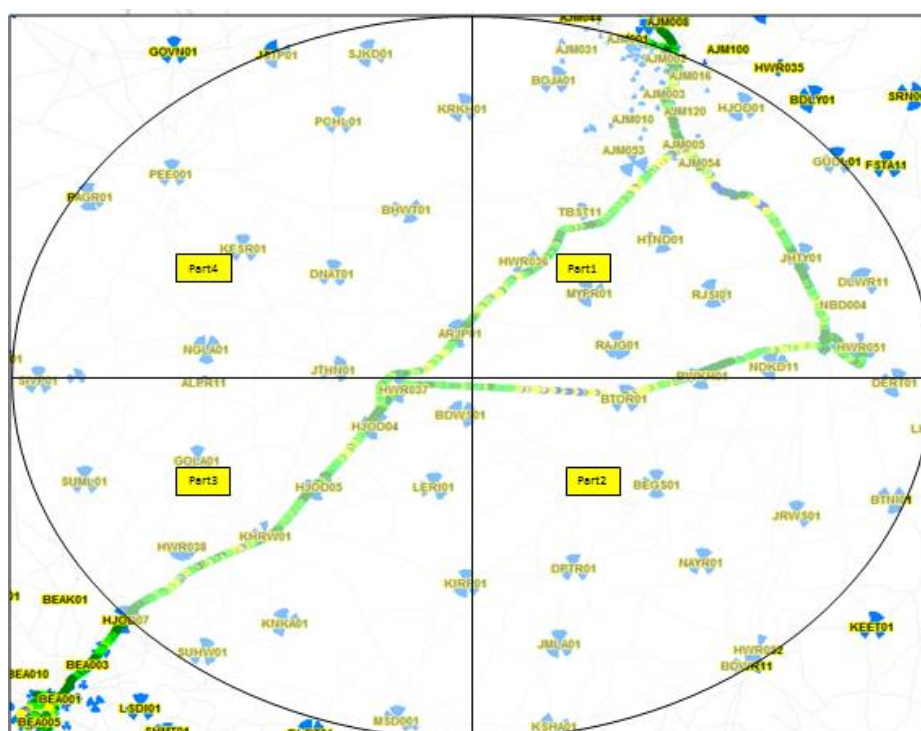
13.2. DISTANCE COVERED: AJMER SSA

Drive Test Distance Covered	Day 1	Day 2	Day 3
Ajmer SSA	150 km	150 km	130 km

13.3. ROUTE MAP: AJMER SSA: DAY 1

SSA: Ajmer
Outdoor
Route Name
Ajmer Bus Stand, Saint Mary Church, Khan Pura Road, Makreda, Mangliyawas, Lamana, Kharwa, Rampura Mewatiyan Rural, RIICO Road, Shivganj Colony, Champa Nagar, Pushkar Ganj
Beawer College, Om nagar, Nehru Gate, Amrit Kaour Government Hospital, Modi City Center, SD Govt. College, Ajmeri Gate Kekari Road, AVVNL GSS Sub Station, Mohan Nagar, Bank OF Baroda ATM, ST Paul Sr. Secondary School, Janta Colony, naya bass, Shahpura, Paratap nagar

BSNL Exchange Beawer, Mediya, Nadi, Mangliyawas, Makreda, Beawer Road, 5 Bunglaow Road, Dhola Bhata, Vigyan Nagar, Arjun Lal Sethi Nagar, Bara gaon, Hatoondi, Lachipura, Rajosi, Nasirabad Bus Stand
Indoor
Route Name
Beawer BSNL Exchange



13.4. ROUTE MAP: AJMER SSA: DAY 2

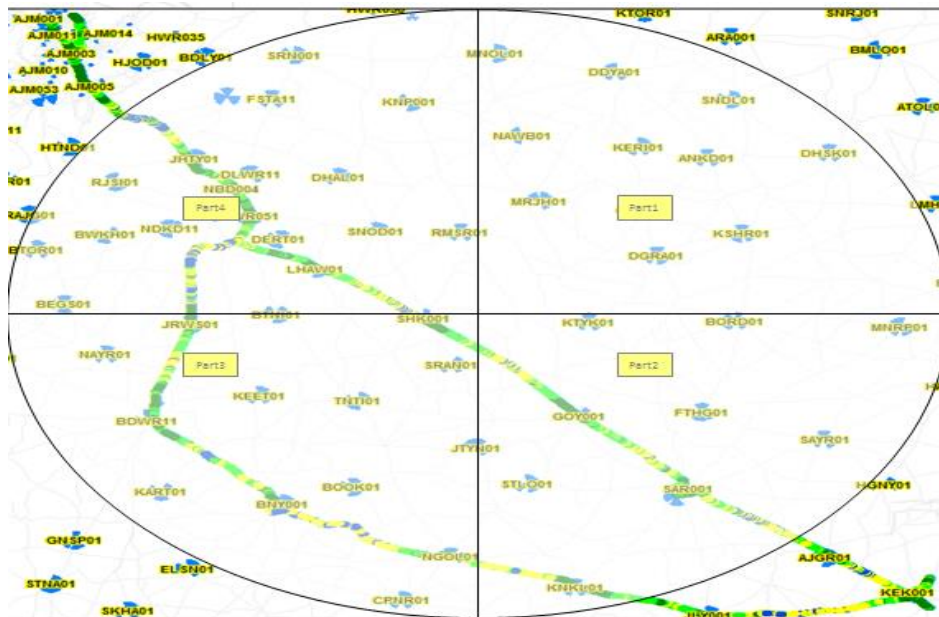
SSA: Ajmer
Outdoor
Route Name
Ajmer Bus Stand, Adarsh nagar, Railway Station, Jatiya, Dilwari, Nasirabad Road, Goyala, Banti, Arwar, Kota road, Trailer transport Company, Nasirabad, Jatiya, Makhpura, Parbatpura, BSNL Office Ajmer
Jharwasa, Badanwara, Kekri Road, Badanwara-Bhinai-Nagola, Major Road Kekri - Badanwara-Bhinai- Nagola Road
Bijasan Mata Temple, Bus stand Kekari, Rajkamal Store, Charbhuj mandir, Raghu Colony , Rajasthan Bank ATM, BSNL Office Kekari, Bawadi Balaji Mandir, Surajpole Gate, Bohra Colony, Krishna Nagar, Kalyan Colony, Gopalpura,

Krishi Upaj Mandi, Tehsil Sarwar, Gayatri Dairy, Baba Ramdev Regar Community, Sarwar Sarif, Adinath Digambar Jain Mandir. Kila road, Nagola road

Indoor

Route Name

Bus Stand Kekari



13.5. ROUTE MAP: AJMER SSA: DAY 3

SSA: Ajmer
Outdoor
Route Name
Soni ji ki Nasiya, Agra gate, BSNL Office, Oswal Sr. secondary School, Regency Hotel, Hotel embassy, Mittal Hospital, Hotel regal, SBBJ Bank, Bus stand, Railway Station, Pushkar road, Collectrate office, Tehsil, Army area, Naya bazar, dargaha road, Mayo College, Govt. Girls College, General Post office, Gandhi bhawan Circle. Jawahar Lal Hospital, Azad Park, Collectrate, Miraj Cinema, Cine multiplex
Greentech Mega City, Moti Art Studio, SKYZ Stones Ltd, Jamna Marble, Hotel Rajdeep Palace, Roopangarh Fort.
Maliyo ki dhani, Vyapari Mohalla, Hotel Krrish Palace, Balaji Temple, Police Station Madanganj, Kishangarh, fruit Mandi, Shree Radha Madhav Mandir, MSS public School, KD Jain School, Madanganj Kishangarh Railway Station, Gandhinagar
Indoor
Route Name

5 ≤ S < 6	37	6681	0.55	100.00	
6 ≤ S	28	6681	0.42		
RxLev	Samples	Total	%		
0 to > = -75	6499	6904	94.13		
0 to > = -85	6899	6904	99.93		
0 to > = -95	6904	6904	100.00		
Over All SSA Drive Test Details Day-1					
RxQual	Samples (S)	Total	%	Summary	
0-4 (w/o frequency hopping)/CDMA				100.00	
0-5 (with frequency hopping)	35498	36851	96.33		
Total Call Attempt	138				
Blocked Call Rate (<=3%)	0.00%				
Dropped Call Rate (<=2%)	0.00%				
Call Setup Success Rate (>=95%)	100.00%				
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%				
RxLev	Samples	Total	%		
0 to > = -75	16533	38104	43.39		
0 to > = -85	28525	38104	74.86		
0 to > = -95	36059	38104	94.63		
SSA (Urban/Rural)-Day 1					
RxQual		Samples (S)	Total	%	Summary
0 ≤ S < 1		35239	48942	72.00	95.17
1 ≤ S < 2		2145	48942	4.38	
2 ≤ S < 3		2336	48942	4.77	
3 ≤ S < 4		2530	48942	5.17	
4 ≤ S < 5		2143	48942	4.38	
5 ≤ S < 6		2185	48942	4.46	
6 ≤ S		2364	48942	4.83	
RxLev		Samples	Total	%	94.91
0 to > = -75		18045	50422	35.79	
0 to > = -85		41730	50422	82.76	
0 to > = -95		47858	50422	94.91	
Office Complex SSA (Urban/Rural)- Day 1					
RxQual		Samples (S)	Total	%	Summary
0 ≤ S < 1		5609	6417	87.41	99.41
1 ≤ S < 2		203	6417	3.16	
2 ≤ S < 3		222	6417	3.46	
3 ≤ S < 4		157	6417	2.45	
4 ≤ S < 5		108	6417	1.68	

5 ≤ S < 6	80	6417	1.25	99.99
6 ≤ S	38	6417	0.59	
RxLev	Samples	Total	%	
0 to > = -75	681	6683	10.19	
0 to > = -85	6467	6683	96.77	
0 to > = -95	6682	6683	99.99	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	52957	55359	95.66	
Total Call Attempt	168			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	18726	57105	32.79	
0 to > = -85	48197	57105	84.40	
0 to > = -95	54540	57105	95.51	

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	81527	89813	90.77	96.41
$1 \leq S < 2$	827	89813	0.92	
$2 \leq S < 3$	899	89813	1	
$3 \leq S < 4$	953	89813	1.06	
$4 \leq S < 5$	1032	89813	1.15	
$5 \leq S < 6$	1350	89813	1.5	
$6 \leq S$	3225	89813	3.59	
RxLev	Samples	Total	%	
0 to ≥ -75	97454	101750	95.78	
0 to ≥ -85	101353	101750	99.61	
0 to ≥ -95	101689	101750	99.94	

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6345	6370	99.61	99.69
$1 \leq S < 2$	0	6370	0	
$2 \leq S < 3$	0	6370	0	
$3 \leq S < 4$	0	6370	0	

$4 \leq S < 5$	5	6370	0.08	
$5 \leq S < 6$	0	6370	0	
$6 \leq S$	20	6370	0.31	
RxLev	Samples	Total	%	
0 to ≥ -75	6765	6765	100	
0 to ≥ -85	6765	6765	100	
0 to ≥ -95	6765	6765	100	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				96.63
0-5 (with frequency hopping)	92938	96183	96.63	
Total Call Attempt	182			
Blocked Call Rate ($\leq 3\%$)	0.54%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	99.45%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.66%			
RxLev	Samples	Total	%	
0 to ≥ -75	104219	108515	96.04	
0 to ≥ -85	108118	108515	99.63	
0 to ≥ -95	108454	108515	99.94	

13.6.2. AIRCEL DAY 2:

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	29205	35352	82.61	96.02
1 ≤ S < 2	905	35352	2.56	
2 ≤ S < 3	873	35352	2.47	
3 ≤ S < 4	864	35352	2.44	
4 ≤ S < 5	980	35352	2.77	
5 ≤ S < 6	1118	35352	3.16	
6 ≤ S	1407	35352	3.98	
RxLev	Samples	Total	%	96.70
0 to > = -75	19779	36371	54.38	
0 to > = -85	28884	36371	79.41	
0 to > = -95	35170	36371	96.70	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	4148	6655	62.33	93.69
1 ≤ S < 2	325	6655	4.88	
2 ≤ S < 3	357	6655	5.36	
3 ≤ S < 4	428	6655	6.43	
4 ≤ S < 5	500	6655	7.51	
5 ≤ S < 6	477	6655	7.17	
6 ≤ S	420	6655	6.31	

RxLev	Samples	Total	%	
0 to > = -75	6835	6860	99.64	100.00
0 to > = -85	6860	6860	100.00	
0 to > = -95	6860	6860	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	40180	42007	95.65	
Total Call Attempt	157			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	26614	43231	61.56	
0 to > = -85	35744	43231	82.68	
0 to > = -95	42030	43231	97.22	

13.6.3. AIRCEL DAY 3:

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	34673	39774	87.18	97.17
1 ≤ S < 2	711	39774	1.79	
2 ≤ S < 3	771	39774	1.94	
3 ≤ S < 4	824	39774	2.07	
4 ≤ S < 5	784	39774	1.97	
5 ≤ S < 6	886	39774	2.23	
6 ≤ S	1125	39774	2.83	
RxLev	Samples	Total	%	99.11
0 to > = -75	32800	40987	80.03	
0 to > = -85	39396	40987	96.12	
0 to > = -95	40621	40987	99.11	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6733	6744	99.84	99.97
1 ≤ S < 2	1	6744	0.01	
2 ≤ S < 3	2	6744	0.03	
3 ≤ S < 4	1	6744	0.01	

4 ≤ S < 5	1	6744	0.01	100.00
5 ≤ S < 6	4	6744	0.06	
6 ≤ S	2	6744	0.03	
RxLev	Samples	Total	%	
0 to > = -75	6957	6962	99.93	
0 to > = -85	6962	6962	100.00	
0 to > = -95	6962	6962	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				100.00
0-5 (with frequency hopping)	45391	46518	97.58	
Total Call Attempt	174			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	39757	47949	82.92	
0 to > = -85	46358	47949	96.68	
0 to > = -95	47583	47949	99.24	

13.6.4. AIRCEL OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	105838	125376	84.42	96.56
$1 \leq S < 2$	2724	125376	2.17	
$2 \leq S < 3$	2822	125376	2.25	
$3 \leq S < 4$	3004	125376	2.40	
$4 \leq S < 5$	3183	125376	2.54	
$5 \leq S < 6$	3498	125376	2.79	
$6 \leq S$	4307	125376	3.44	
RxLev	Samples	Total	%	
0 to ≥ -75	82904	129284	64.13	97.21
0 to ≥ -85	110627	129284	85.57	
0 to ≥ -95	125672	129284	97.21	

Total Calls Attempt (A)	469
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Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	469
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.6.5. AIRTEL: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	454775	529125	85.95	
1 ≤ S < 2	10699	529125	2.02	
2 ≤ S < 3	11043	529125	2.09	
3 ≤ S < 4	11401	529125	2.15	
4 ≤ S < 5	13275	529125	2.51	
5 ≤ S < 6	12004	529125	2.27	
6 ≤ S	15928	529125	3.01	
RxLev	Samples	Total	%	
0 to > = -75	124204	151067	82.2178239	
0 to > = -85	146765	151067	97.1522569	
0 to > = -95	151067	151067	100	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5616	7050	79.66	
1 ≤ S < 2	317	7050	4.50	
2 ≤ S < 3	283	7050	4.01	
3 ≤ S < 4	289	7050	4.10	
4 ≤ S < 5	197	7050	2.79	
5 ≤ S < 6	150	7050	2.13	
6 ≤ S	198	7050	2.81	
RxLev	Samples	Total	%	
0 to > = -75	7078	7095	99.7603946	
0 to > = -85	7095	7095	100	
0 to > = -95	7095	7095	100	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	520049	536175	96.99	

Total Call Attempt	203	
Blocked Call Rate (<=3%)	0.00%	
Dropped Call Rate (<=2%)	0.00%	
Call Setup Success Rate (>=95%)	100.00%	
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%	
RxLev	Samples	Total
0 to > = -75	131282	158162
0 to > = -85	153860	158162
0 to > = -95	158162	158162

13.6.6. AIRTEL: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	461717	517248	89.26	
1 ≤ S < 2	8279	517248	1.60	
2 ≤ S < 3	8246	517248	1.59	
3 ≤ S < 4	8828	517248	1.71	
4 ≤ S < 5	9452	517248	1.83	
5 ≤ S < 6	8509	517248	1.65	
6 ≤ S	12217	517248	2.36	
RxLev	Samples	Total	%	
0 to > = -75	90677	130920	69.261381	
0 to > = -85	120334	130920	91.914146	
0 to > = -95	130920	130920	100	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5316	6460	82.29	
1 ≤ S < 2	217	6460	3.36	
2 ≤ S < 3	223	6460	3.45	
3 ≤ S < 4	189	6460	2.93	
4 ≤ S < 5	197	6460	3.05	
5 ≤ S < 6	150	6460	2.32	
6 ≤ S	168	6460	2.60	
RxLev	Samples	Total	%	
0 to > = -75	7014	7031	99.758214	
0 to > = -85	7031	7031	100	
0 to > = -95	7031	7031	100	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	511323	523708	97.64	
Total Call Attempt	198			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	97691	137951	70.82	
0 to > = -85	127365	137951	92.33	
0 to > = -95	137951	137951	100.00	

13.6.7. AIRTEL: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	520739	877300	59.36	
1 ≤ S < 2	58804	877300	6.70	
2 ≤ S < 3	114173	877300	13.01	
3 ≤ S < 4	84004	877300	9.58	
4 ≤ S < 5	63216	877300	7.21	
5 ≤ S < 6	16549	877300	1.89	
6 ≤ S	19815	877300	2.26	
RxLev	Samples	Total	%	
0 to > = -75	117538	129217	90.9617156	
0 to > = -85	127753	129217	98.8670221	
0 to > = -95	129217	129217	100	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6292	6434	97.79	
1 ≤ S < 2	26	6434	0.40	
2 ≤ S < 3	12	6434	0.19	
3 ≤ S < 4	12	6434	0.19	
4 ≤ S < 5	14	6434	0.22	

5 ≤ S < 6	14	6434	0.22	
6 ≤ S	64	6434	0.99	
RxLev	Samples	Total	%	
0 to > = -75	2530	6991	36.1893864	
0 to > = -85	6801	6991	97.28222	
0 to > = -95	6991	6991	100	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	863855	883734	97.75	
Total Call Attempt	194			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	120068	136208	88.15	
0 to > = -85	134554	136208	98.79	
0 to > = -95	136208	136208	100.00	

13.6.8. AIRTEL: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	1454455	1943617	74.83	
1 ≤ S < 2	78342	1943617	4.03	
2 ≤ S < 3	133980	1943617	6.89	
3 ≤ S < 4	104723	1943617	5.39	
4 ≤ S < 5	86351	1943617	4.44	
5 ≤ S < 6	37376	1943617	1.92	
6 ≤ S	48390	1943617	2.49	
RxLev	Samples	Total	%	
0 to > = -75	349041	432321	80.73654	
0 to > = -85	415779	432321	96.17368	

0 to > = -95	432321	432321	100	
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Total Calls Attempt (A)	595
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	595
Total Calls Drop (D)	0
Dropped Calls Rate in % (D/C)	0.00%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.6.9. IDEA: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	40164	54355	73.89	
1 ≤ S < 2	2343	54355	4.31	
2 ≤ S < 3	2326	54355	4.28	
3 ≤ S < 4	2715	54355	4.99	
4 ≤ S < 5	2175	54355	4.00	
5 ≤ S < 6	2316	54355	4.26	
6 ≤ S	2316	54355	4.26	
RxLev	Samples	Total	%	
0 to > = -75	46814	61979	75.53	
0 to > = -85	60035	61979	96.86	
0 to > = -95	61867	61979	99.82	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2091	3966	52.72	
1 ≤ S < 2	439	3966	11.07	
2 ≤ S < 3	406	3966	10.24	
3 ≤ S < 4	412	3966	10.39	
4 ≤ S < 5	318	3966	8.02	
5 ≤ S < 6	198	3966	4.99	
6 ≤ S	102	3966	2.57	
RxLev	Samples	Total	%	
0 to > = -75	6157	6378	96.53	
0 to > = -85	6377	6378	99.98	
0 to > = -95	6378	6378	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary

0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	55903	58321	95.85	
Total Call Attempt	142			
Blocked Call Rate (<=3%)	1.41%			
Dropped Call Rate (<=2%)	0.71%			
Call Setup Success Rate (>=95%)	98.59%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.38%			
RxLev	Samples	Total	%	
0 to > = -75	52971	68357	77.49	
0 to > = -85	66412	68357	97.15	
0 to > = -95	68245	68357	99.84	

13.6.10. IDEA: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	35568	47958	74.16	
1 ≤ S < 2	2111	47958	4.40	
2 ≤ S < 3	2371	47958	4.94	
3 ≤ S < 4	1900	47958	3.96	
4 ≤ S < 5	2007	47958	4.18	
5 ≤ S < 6	2031	47958	4.23	
6 ≤ S	1970	47958	4.11	
RxLev	Samples	Total	%	
0 to > = -75	38428	54016	71.14	
0 to > = -85	48854	54016	90.44	
0 to > = -95	53265	54016	98.61	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	229	252	90.87	
1 ≤ S < 2	7	252	2.78	
2 ≤ S < 3	4	252	1.59	
3 ≤ S < 4	3	252	1.19	
4 ≤ S < 5	5	252	1.98	
5 ≤ S < 6	3	252	1.19	
6 ≤ S	1	252	0.40	

RxLev	Samples	Total	%	
0 to > = -75	5815	6246	93.10	
0 to > = -85	6214	6246	99.49	
0 to > = -95	6246	6246	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	46239	48210	95.91	
Total Call Attempt	128			
Blocked Call Rate (<=3%)	0.78%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	99.22%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	44243	60262	73.42	
0 to > = -85	55068	60262	91.38	
0 to > = -95	59511	60262	98.75	

13.6.11. IDEA: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	47472	69075	68.73	
1 ≤ S < 2	3655	69075	5.29	
2 ≤ S < 3	4461	69075	6.46	
3 ≤ S < 4	3947	69075	5.71	
4 ≤ S < 5	3164	69075	4.58	
5 ≤ S < 6	3258	69075	4.72	
6 ≤ S	3118	69075	4.51	
RxLev	Samples	Total	%	
0 to > = -75	64751	75192	86.11	
0 to > = -85	73848	75192	98.21	
0 to > = -95	75172	75192	99.97	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2283	3798	60.11	
1 ≤ S < 2	335	3798	8.82	
2 ≤ S < 3	335	3798	8.82	
3 ≤ S < 4	320	3798	8.43	

$4 \leq S < 5$	233	3798	6.13	
$5 \leq S < 6$	172	3798	4.53	
$6 \leq S$	120	3798	3.16	
RxLev	Samples	Total	%	
0 to ≥ -75	6544	6610	99.00	
0 to ≥ -85	6610	6610	100.00	
0 to ≥ -95	6610	6610	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	69635	72873	95.56	
Total Call Attempt	184			
Blocked Call Rate ($\leq 3\%$)	0.00%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.61%			
RxLev	Samples	Total	%	
0 to ≥ -75	71295	81802	87.16	
0 to ≥ -85	80458	81802	98.36	
0 to ≥ -95	81782	81802	99.98	

13.6.12. IDEA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	127807	179404	71.24	
$1 \leq S < 2$	8890	179404	4.96	
$2 \leq S < 3$	9903	179404	5.52	
$3 \leq S < 4$	9297	179404	5.18	
$4 \leq S < 5$	7902	179404	4.40	
$5 \leq S < 6$	7978	179404	4.45	
$6 \leq S$	7627	179404	4.25	
RxLev	Samples	Total	%	
0 to ≥ -75	168509	210421	80.1%	
0 to ≥ -85	201938	210421	96.0%	
0 to ≥ -95	209538	210421	99.6%	

Total Calls Attempt (A)	454
Total Calls Blocked (B)	3
Blocked Call Rate in % (B*100/A)	0.66%
Total Calls Established ('C)	451
Total Calls Drop (D)	1
Dropped Calls Rate in % (D*100/C)	0.22%
Call Setup Success Rate in % (C*100/A)	99.34%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.8%

13.6.13. BSNL: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	14584	21201	68.79	
1 ≤ S < 2	943	21201	4.45	
2 ≤ S < 3	1090	21201	5.14	
3 ≤ S < 4	1163	21201	5.48	
4 ≤ S < 5	1151	21201	5.43	
5 ≤ S < 6	1079	21201	5.09	
6 ≤ S	1191	21201	5.62	
RxLev	Samples	Total	%	
0 to > = -75	17351	24174	71.78	
0 to > = -85	22552	24174	93.29	
0 to > = -95	23922	24174	98.96	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	1248	2451	50.92	
1 ≤ S < 2	173	2451	7.06	
2 ≤ S < 3	248	2451	10.12	
3 ≤ S < 4	284	2451	11.59	
4 ≤ S < 5	234	2451	9.55	
5 ≤ S < 6	170	2451	6.94	
6 ≤ S	94	2451	3.84	
RxLev	Samples	Total	%	
0 to > = -75	1342	1342	100.00	
0 to > = -85	1342	1342	100.00	
0 to > = -95	1342	1342	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary

0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	23558	23652	99.60	
Total Call Attempt	218			
Blocked Call Rate (<=3%)	0.92%			
Dropped Call Rate (<=2%)	0.46%			
Call Setup Success Rate (>=95%)	99.08%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.03%			
RxLev	Samples	Total	%	
0 to > = -75	18693	25516	73.26	
0 to > = -85	23894	25516	93.64	
0 to > = -95	25264	25516	99.01	

13.6.14. BSNL: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	12408	16082	77.15	
1 ≤ S < 2	553	16082	3.44	
2 ≤ S < 3	575	16082	3.58	
3 ≤ S < 4	634	16082	3.94	
4 ≤ S < 5	617	16082	3.84	
5 ≤ S < 6	588	16082	3.66	
6 ≤ S	707	16082	4.40	
RxLev	Samples	Total	%	
0 to > = -75	13823	18365	75.27	
0 to > = -85	16693	18365	90.90	
0 to > = -95	18210	18365	99.16	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2918	3648	79.99	
1 ≤ S < 2	160	3648	4.39	
2 ≤ S < 3	189	3648	5.18	
3 ≤ S < 4	173	3648	4.74	
4 ≤ S < 5	114	3648	3.13	
5 ≤ S < 6	57	3648	1.56	
6 ≤ S	37	3648	1.01	
RxLev	Samples	Total	%	
0 to > = -75	2139	2139	100.00	

0 to > = -85	2139	2139	100.00	
0 to > = -95	2139	2139	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	18986	19730	96.23	
Total Call Attempt	174			
Blocked Call Rate (<=3%)	2.29%			
Dropped Call Rate (<=2%)	1.76%			
Call Setup Success Rate (>=95%)	97.70.%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.66%			
RxLev	Samples	Total	%	
0 to > = -75	15962	20504	77.85	
0 to > = -85	18832	20504	91.85	
0 to > = -95	20349	20504	99.24	

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	193487	25.32	
1 ≤ S < 2	49000	193487	25.32	
2 ≤ S < 3	47000	193487	24.29	
3 ≤ S < 4	48487	193487	25.06	
4 ≤ S < 5	0	193487	0.00	
5 ≤ S < 6	0	193487	0.00	
6 ≤ S	0	193487	0.00	
RxLev	Samples	Total	%	
0 to > = -75	70000	206053	33.97	
0 to > = -85	68000	206053	33.00	
0 to > = -95	68053	206053	33.03	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	55228	88.72	
1 ≤ S < 2	6228	55228	11.28	
2 ≤ S < 3	0	55228	0.00	
3 ≤ S < 4	0	55228	0.00	
4 ≤ S < 5	0	55228	0.00	
5 ≤ S < 6	0	55228	0.00	
6 ≤ S	0	55228	0.00	
RxLev	Samples	Total	%	

0 to > = -75	19300	57638	33.48	
0 to > = -85	19200	57638	33.31	
0 to > = -95	19138	57638	33.20	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	197669	211770	93.34	
Total Call Attempt	169			
Blocked Call Rate (<=3%)	0.59%			
Dropped Call Rate (<=2%)	1.18%			
Call Setup Success Rate (>=95%)	98.23%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	91.80%			
RxLev	Samples	Total	%	
0 to > = -75	84000	247555	33.93	
0 to > = -85	81000	247555	32.72	
0 to > = -95	82555	247555	33.35	

SSA (Urban/Rural)-Day 2					
RxQual		Samples (S)	Total	%	Summary
0 ≤ S < 1		24363	28125	86.62	96.53
1 ≤ S < 2		542	28125	1.93	
2 ≤ S < 3		510	28125	1.81	
3 ≤ S < 4		570	28125	2.03	
4 ≤ S < 5		534	28125	1.9	
5 ≤ S < 6		630	28125	2.24	
6 ≤ S		976	28125	3.47	
RxLev		Samples	Total	%	
0 to > = -75		16125	45330	35.57	
0 to > = -85		34422	45330	75.94	
0 to > = -95		42484	45330	93.72	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3556	3881	91.63	99.02
1 ≤ S < 2	72	3881	1.86	

$2 \leq S < 3$	56	3881	1.44	
$3 \leq S < 4$	67	3881	1.73	
$4 \leq S < 5$	47	3881	1.21	
$5 \leq S < 6$	45	3881	1.16	
$6 \leq S$	38	3881	0.98	
RxLev	Samples	Total	%	
0 to ≥ -75	3847	4044	99.92	
0 to ≥ -85	4044	4044	100	
0 to ≥ -95	4044	4044	100	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				96.83
0-5 (with frequency hopping)	30992	32006	96.83	
Total Call Attempt	134			
Blocked Call Rate ($\leq 3\%$)	1.49%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	99.39%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.50%			
RxLev	Samples	Total	%	
0 to ≥ -75	19972	49374	40.45	
0 to ≥ -85	38466	49374	77.91	
0 to ≥ -95	46528	49374	94.24	

13.6.15. BSNL: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	15486	21185	73.10	
$1 \leq S < 2$	747	21185	3.53	
$2 \leq S < 3$	925	21185	4.37	
$3 \leq S < 4$	1043	21185	4.92	
$4 \leq S < 5$	983	21185	4.64	
$5 \leq S < 6$	942	21185	4.45	

6 ≤ S	1059	21185	5.00	
RxLev	Samples	Total	%	
0 to > = -75	22463	24297	92.45	
0 to > = -85	23955	24297	98.59	
0 to > = -95	24290	24297	99.97	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2729	4976	54.84	
1 ≤ S < 2	341	4976	6.85	
2 ≤ S < 3	414	4976	8.32	
3 ≤ S < 4	457	4976	9.18	
4 ≤ S < 5	440	4976	8.84	
5 ≤ S < 6	353	4976	7.09	
6 ≤ S	242	4976	4.86	
RxLev	Samples	Total	%	
0 to > = -75	2740	2740	100.00	
0 to > = -85	2740	2740	100.00	
0 to > = -95	2740	2740	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	24860	26161	95.03	
Total Call Attempt	204			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.32%			
RxLev	Samples	Total	%	
0 to > = -75	25203	27037	93.22	
0 to > = -85	26695	27037	98.74	
0 to > = -95	27030	27037	99.97	

13.6.16. BSNL: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49373	69543	71.00	

$1 \leq S < 2$	2917	69543	4.19
$2 \leq S < 3$	3441	69543	4.95
$3 \leq S < 4$	3754	69543	5.40
$4 \leq S < 5$	3539	69543	5.09
$5 \leq S < 6$	3189	69543	4.59
$6 \leq S$	3330	69543	4.79
RxLev	Samples	Total	%
0 to ≥ -75	59858	73057	81.9%
0 to ≥ -85	69421	73057	95.0%
0 to ≥ -95	72643	73057	99.4%

Total Calls Attempt (A)	596
Total Calls Blocked (B)	6
Blocked Call Rate in % ($B \times 100 / A$)	1.01%
Total Calls Established (C)	590
Total Calls Drop (D)	4
Dropped Calls Rate in % ($D \times 100 / C$)	0.68%
Call Setup Success Rate in % ($C \times 100 / A$)	98.99%
Handover Success Rate % (total HO Success * 100 / Total HO attempt)	98.9%

13.6.17. MTS: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	20647	31977	64.57	
1 ≤ S < 2	7657	31977	23.95	
2 ≤ S < 3	2306	31977	7.21	
3 ≤ S < 4	604	31977	1.89	
4 ≤ S < 5	128	31977	0.40	
5 ≤ S < 6	82	31977	0.26	
6 ≤ S	553	31977	1.73	
RxLev	Samples	Total	%	
0 to > = -75	29919	36024	83.05	
0 to > = -85	35682	36024	99.05	
0 to > = -95	35988	36024	99.90	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3312	5767	57.43	
1 ≤ S < 2	2258	5767	39.15	
2 ≤ S < 3	194	5767	3.36	
3 ≤ S < 4	3	5767	0.05	
4 ≤ S < 5	0	5767	0.00	

5 ≤ S < 6	0	5767	0.00	
6 ≤ S	0	5767	0.00	
RxLev	Samples	Total	%	
0 to > = -75	6715	6715	100.00	
0 to > = -85	6715	6715	100.00	
0 to > = -95	6715	6715	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	36981	37744	97.98	
0-5 (with frequency hopping)				
Total Call Attempt	191			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.74%			
RxLev	Samples	Total	%	
0 to > = -75	36634	42739	85.72	
0 to > = -85	42397	42739	99.20	
0 to > = -95	42703	42739	99.92	

13.6.18. MTS: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	23104	33304	69.37	
1 ≤ S < 2	6664	33304	20.01	
2 ≤ S < 3	2282	33304	6.85	
3 ≤ S < 4	553	33304	1.66	
4 ≤ S < 5	157	33304	0.47	
5 ≤ S < 6	105	33304	0.32	
6 ≤ S	439	33304	1.32	
RxLev	Samples	Total	%	
0 to > = -75	28789	37203	77.38	
0 to > = -85	34827	37203	93.61	
0 to > = -95	37179	37203	99.94	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	4913	5855	83.91	

1 ≤ S < 2	654	5855	11.17	
2 ≤ S < 3	223	5855	3.81	
3 ≤ S < 4	53	5855	0.91	
4 ≤ S < 5	8	5855	0.14	
5 ≤ S < 6	0	5855	0.00	
6 ≤ S	4	5855	0.07	
RxLev	Samples	Total	%	
0 to > = -75	6652	7067	94.13	
0 to > = -85	7060	7067	99.90	
0 to > = -95	7067	7067	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	38446	39159	98.18	
0-5 (with frequency hopping)				
Total Call Attempt	201			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.90%			
RxLev	Samples	Total	%	
0 to > = -75	35441	44270	80.06	
0 to > = -85	41887	44270	94.62	
0 to > = -95	44246	44270	99.95	

13.6.19. MTS: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	36300	39903	90.97	
$1 \leq S < 2$	212	39903	0.53	
$2 \leq S < 3$	1810	39903	4.54	
$3 \leq S < 4$	340	39903	0.85	
$4 \leq S < 5$	445	39903	1.12	
$5 \leq S < 6$	147	39903	0.37	
$6 \leq S$	649	39903	1.63	
RxLev	Samples	Total	%	

0 to > = -75	37588	39903	94.20	
0 to > = -85	39344	39903	98.60	
0 to > = -95	39902	39903	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	4864	5312	91.57	
1 ≤ S < 2	15	5312	0.28	
2 ≤ S < 3	224	5312	4.22	
3 ≤ S < 4	25	5312	0.47	
4 ≤ S < 5	43	5312	0.81	
5 ≤ S < 6	4	5312	0.08	
6 ≤ S	137	5312	2.58	
RxLev	Samples	Total	%	
0 to > = -75	5312	5312	100.00	
0 to > = -85	5312	5312	100.00	
0 to > = -95	5312	5312	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	43972	45215	97.25	
0-5 (with frequency hopping)				
Total Call Attempt	166			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	42900	45215	94.88	
0 to > = -85	44656	45215	98.76	
0 to > = -95	45214	45215	100.00	

13.6.20. MTS: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	93322	122300	76.31	
1 ≤ S < 2	17460	122300	14.28	
2 ≤ S < 3	7039	122300	5.76	

$3 \leq S < 4$	1578	122300	1.29
$4 \leq S < 5$	781	122300	0.64
$5 \leq S < 6$	338	122300	0.28
$6 \leq S$	1782	122300	1.46
RxLev	Samples	Total	%
0 to ≥ -75	114975	132224	86.95%
0 to ≥ -85	128940	132224	97.52%
0 to ≥ -95	132163	132224	99.95%

Total Calls Attempt (A)	558
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B \times 100 / A$)	0.00%
Total Calls Established (C)	558
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D \times 100 / C$)	0.00%
Call Setup Success Rate in % ($C \times 100 / A$)	100.00%
Handover Success Rate % (total HO Success * 100 / Total HO attempt)	99.90%

13.6.21. RCOM GSM : DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	13365	16382	81.58	
$1 \leq S < 2$	528	16382	3.22	
$2 \leq S < 3$	560	16382	3.42	
$3 \leq S < 4$	666	16382	4.07	
$4 \leq S < 5$	561	16382	3.42	
$5 \leq S < 6$	553	16382	3.38	
$6 \leq S$	149	16382	0.91	
RxLev	Samples	Total	%	
0 to ≥ -75	12379	16378	75.58	
0 to ≥ -85	15117	16378	92.30	
0 to ≥ -95	16236	16378	99.13	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	3050	3339	91.34	
$1 \leq S < 2$	65	3339	1.95	
$2 \leq S < 3$	93	3339	2.79	
$3 \leq S < 4$	77	3339	2.31	
$4 \leq S < 5$	29	3339	0.87	
$5 \leq S < 6$	14	3339	0.42	

6 ≤ S	11	3339	0.33	
RxLev	Samples	Total	%	
0 to > = -75	2929	3339	87.72	
0 to > = -85	3337	3339	99.94	
0 to > = -95	3339	3339	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	18994	19721	96.31	
Total Call Attempt	163			
Blocked Call Rate (<=3%)	0.61%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	99.39%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.70%			
RxLev	Samples	Total	%	
0 to > = -75	15308	19717	77.64	
0 to > = -85	18454	19717	93.59	
0 to > = -95	19575	19717	99.28	

13.6.22. RCOM GSM: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	11747	14097	83.33	
1 ≤ S < 2	418	14097	2.97	
2 ≤ S < 3	441	14097	3.13	
3 ≤ S < 4	458	14097	3.25	
4 ≤ S < 5	445	14097	3.16	
5 ≤ S < 6	439	14097	3.11	
6 ≤ S	149	14097	1.06	
RxLev	Samples	Total	%	
0 to > = -75	10940	14095	77.62	
0 to > = -85	12950	14095	91.88	
0 to > = -95	13926	14095	98.80	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2880	3330	86.49	
1 ≤ S < 2	79	3330	2.37	
2 ≤ S < 3	92	3330	2.76	

3 ≤ S < 4	114	3330	3.42	
4 ≤ S < 5	68	3330	2.04	
5 ≤ S < 6	54	3330	1.62	
6 ≤ S	43	3330	1.29	
RxLev	Samples	Total	%	
0 to > = -75	3330	3330	100.00	
0 to > = -85	3330	3330	100.00	
0 to > = -95	3330	3330	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	16742	17427	96.07	
Total Call Attempt	138			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	14270	17425	81.89	
0 to > = -85	16280	17425	93.43	
0 to > = -95	17256	17425	99.03	

13.6.23. RCOM GSM: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	12698	15246	83.29	
$1 \leq S < 2$	422	15246	2.77	
$2 \leq S < 3$	477	15246	3.13	
$3 \leq S < 4$	505	15246	3.31	
$4 \leq S < 5$	518	15246	3.40	
$5 \leq S < 6$	625	15246	4.10	
$6 \leq S$	1	15246	0.01	
RxLev	Samples	Total	%	
0 to ≥ -75	12632	15244	82.87	
0 to ≥ -85	14410	15244	94.53	
0 to ≥ -95	15195	15244	99.68	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3250	3313	98.10	
1 ≤ S < 2	16	3313	0.48	
2 ≤ S < 3	13	3313	0.39	
3 ≤ S < 4	15	3313	0.45	
4 ≤ S < 5	9	3313	0.27	
5 ≤ S < 6	5	3313	0.15	
6 ≤ S	5	3313	0.15	
RxLev	Samples	Total	%	
0 to > = -75	3312	3312	100.00	
0 to > = -85	3312	3312	100.00	
0 to > = -95	3312	3312	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	17923	18559	96.57	
Total Call Attempt	147			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.56%			
RxLev	Samples	Total	%	
0 to > = -75	15944	18556	85.92	
0 to > = -85	17722	18556	95.51	
0 to > = -95	18507	18556	99.74	

13.6.24. RCOM GSM: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	46990	55707	84.35	
$1 \leq S < 2$	1528	55707	2.74	
$2 \leq S < 3$	1676	55707	3.01	
$3 \leq S < 4$	1835	55707	3.29	
$4 \leq S < 5$	1630	55707	2.93	
$5 \leq S < 6$	1690	55707	3.03	

$6 \leq S$	358	55707	0.64
RxLev	Samples	Total	%
0 to ≥ -75	45522	55698	81.7%
0 to ≥ -85	52456	55698	94.2%
0 to ≥ -95	55338	55698	99.4%

Total Calls Attempt (A)	448
Total Calls Blocked (B)	1
Blocked Call Rate in % (B*100/A)	0.22%
Total Calls Established (C)	447
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	99.78%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.1%

13.6.25. RCOM CDMA:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	36125	36551	98.83	
$1 \leq S < 2$	42	36551	0.11	
$2 \leq S < 3$	254	36551	0.69	
$3 \leq S < 4$	36	36551	0.10	
$4 \leq S < 5$	29	36551	0.08	
$5 \leq S < 6$	15	36551	0.04	
$6 \leq S$	50	36551	0.14	
RxLev	Samples	Total	%	
0 to ≥ -75	27832	36551	76.15	
0 to ≥ -85	32510	36551	88.94	
0 to ≥ -95	36112	36551	98.80	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	3338	3338	100.00	
$1 \leq S < 2$	0	3338	0.00	
$2 \leq S < 3$	0	3338	0.00	
$3 \leq S < 4$	0	3338	0.00	
$4 \leq S < 5$	0	3338	0.00	
$5 \leq S < 6$	0	3338	0.00	
$6 \leq S$	0	3338	0.00	
RxLev	Samples	Total	%	
0 to ≥ -75	3338	3338	100.00	
0 to ≥ -85	3338	3338	100.00	
0 to ≥ -95	3338	3338	100.00	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	39824	39889	99.84	
Total Call Attempt	188			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	31170	39889	78.14	
0 to > = -85	35848	39889	89.87	
0 to > = -95	39450	39889	98.90	

13.6.26. RCOM CDMA:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	27029	27367	98.76	
1 ≤ S < 2	23	27367	0.08	
2 ≤ S < 3	133	27367	0.49	
3 ≤ S < 4	11	27367	0.04	
4 ≤ S < 5	23	27367	0.08	
5 ≤ S < 6	5	27367	0.02	
6 ≤ S	143	27367	0.52	
RxLev	Samples	Total	%	
0 to > = -75	20965	27367	76.61	
0 to > = -85	24095	27367	88.04	
0 to > = -95	26888	27367	98.25	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3739	3740	99.97	
1 ≤ S < 2	0	3740	0.00	
2 ≤ S < 3	1	3740	0.03	
3 ≤ S < 4	0	3740	0.00	
4 ≤ S < 5	0	3740	0.00	
5 ≤ S < 6	0	3740	0.00	

6 ≤ S	0	3740	0.00	
RxLev	Samples	Total	%	
0 to > = -75	3584	3740	95.83	
0 to > = -85	3732	3740	99.79	
0 to > = -95	3740	3740	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	30959	31107	99.52	
Total Call Attempt	168			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.60%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	24549	31107	78.92	
0 to > = -85	27827	31107	89.46	
0 to > = -95	30628	31107	98.46	

13.6.27. RCOM CDMA:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	29073	29460	98.69	
1 ≤ S < 2	39	29460	0.13	
2 ≤ S < 3	294	29460	1.00	
3 ≤ S < 4	14	29460	0.05	
4 ≤ S < 5	30	29460	0.10	
5 ≤ S < 6	2	29460	0.01	
6 ≤ S	8	29460	0.03	
RxLev	Samples	Total	%	
0 to > = -75	25705	29820	86.20	
0 to > = -85	28071	29820	94.13	
0 to > = -95	29265	29820	98.14	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6359	6359	100.00	
1 ≤ S < 2	0	6359	0.00	

$2 \leq S < 3$	0	6359	0.00	
$3 \leq S < 4$	0	6359	0.00	
$4 \leq S < 5$	0	6359	0.00	
$5 \leq S < 6$	0	6359	0.00	
$6 \leq S$	0	6359	0.00	
RxLev	Samples	Total	%	
0 to ≥ -75	6359	6359	100.00	
0 to ≥ -85	6359	6359	100.00	
0 to ≥ -95	6359	6359	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	35809	35819	99.97	
Total Call Attempt	158			
Blocked Call Rate ($\leq 3\%$)	0.00%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to ≥ -75	32064	36179	88.63	
0 to ≥ -85	34430	36179	95.17	
0 to ≥ -95	35624	36179	98.47	

13.6.28. RCOM CDMA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	105663	106815	98.92	
$1 \leq S < 2$	104	106815	0.10	
$2 \leq S < 3$	682	106815	0.64	
$3 \leq S < 4$	61	106815	0.06	
$4 \leq S < 5$	82	106815	0.08	
$5 \leq S < 6$	22	106815	0.02	
$6 \leq S$	201	106815	0.19	
RxLev	Samples	Total	%	
0 to ≥ -75	87783	107175	81.9%	
0 to ≥ -85	98105	107175	91.5%	

0 to > = -95	105702	107175	98.6%	
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Total Calls Attempt (A)	514
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	514
Total Calls Drop (D)	1
Dropped Calls Rate in % (D*100/C)	0.19%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.6.29. TTSL GSM:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	29830	34345	86.85%	
1 < S ≤ 2	809	34345	2.36%	
2 < S ≤ 3	816	34345	2.38%	
3 < S ≤ 4	853	34345	2.48%	
4 < S ≤ 5	932	34345	2.71%	
> 5	1105	34345	3.22%	
RxLev	Samples	Total	%	
0 to > = -75	18463	29148	63.34%	
0 to > = -85	26094	29148	89.52%	
0 to > = -95	29027	29148	99.58%	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	6866	7010	97.95%	
1 < S ≤ 2	41	7010	0.58%	
2 < S ≤ 3	38	7010	0.54%	
3 < S ≤ 4	31	7010	0.44%	
4 < S ≤ 5	16	7010	0.23%	
> 5	18	7010	0.26%	
RxLev	Samples	Total	%	

0 to > = -75	5206	5467	95.23%	
0 to > = -85	5466	5467	99.98%	
0 to > = -95	5467	5467	100.00%	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	40232	41355	97.28%	
Total Call Attempt	158			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	23669	34615	68.38%	
0 to > = -85	31560	34615	91.17%	
0 to > = -95	34494	34615	99.65%	

13.6.30. TTSL GSM:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	28134	31406	89.58%	
1 < S ≤ 2	592	31406	1.88%	
2 < S ≤ 3	627	31406	2.00%	
3 < S ≤ 4	654	31406	2.08%	
4 < S ≤ 5	666	31406	2.12%	
> 5	733	31406	2.33%	
RxLev	Samples	Total	%	
0 to > = -75	17619	26657	66.10%	

0 to > = -85	24136	26657	90.54%	
0 to > = -95	26553	26657	99.61%	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	5345	7710	69.33%	
$1 < S \leq 2$	430	7710	5.58%	
$2 < S \leq 3$	497	7710	6.45%	
$3 < S \leq 4$	535	7710	6.94%	
$4 < S \leq 5$	532	7710	6.90%	
> 5	371	7710	4.81%	
RxLev	Samples	Total	%	
0 to > = -75	5905	6510	90.71%	
0 to > = -85	6509	6510	99.98%	
0 to > = -95	6510	6510	100.00%	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	38012	39116	97.18%	
Total Call Attempt	146			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	23524	33167	70.93%	
0 to > = -85	30645	33167	92.40%	
0 to > = -95	33063	33167	99.69%	

13.6.31. TTSL GSM:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	37822	42887	88.19%	
1 < S ≤ 2	862	42887	2.01%	
2 < S ≤ 3	887	42887	2.07%	
3 < S ≤ 4	968	42887	2.26%	
4 < S ≤ 5	982	42887	2.29%	
> 5	1366	42887	3.19%	
RxLev	Samples	Total	%	
0 to > = -75	30218	36914	81.86%	
0 to > = -85	35907	36914	97.27%	
0 to > = -95	36871	36914	99.88%	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	6695	6715	99.70%	
1 < S ≤ 2	4	6715	0.06%	
2 < S ≤ 3	6	6715	0.09%	
3 < S ≤ 4	5	6715	0.07%	
4 < S ≤ 5	3	6715	0.04%	
> 5	2	6715	0.03%	
RxLev	Samples	Total	%	
0 to > = -75	5775	5806	99.47%	
0 to > = -85	5806	5806	100.00%	
0 to > = -95	5806	5806	100.00%	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	48234	49602	97.24%	
Total Call Attempt	190			

Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	35993	42720	84.25%	
0 to > = -85	41713	42720	97.64%	
0 to > = -95	42677	42720	99.90%	

13.6.32. TTSL GSM: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	114692	130073	88.18%	
1 < S ≤ 2	2738	130073	2.10%	
2 < S ≤ 3	2871	130073	2.21%	
3 < S ≤ 4	3046	130073	2.34%	
4 < S ≤ 5	3131	130073	2.41%	
> 5	3595	130073	2.76%	
RxLev	Samples	Total	%	
0 to > = -75 dbm	83186	110502	75.28%	
0 to > = -85 dbm	103918	110502	94.04%	
0 to > = -95 dbm	110234	110502	99.76%	

Total Calls Attempt (A)	494
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0
Total Calls Established (C)	494
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00
Call Setup Success Rate in % (C*100/A)	100.00%

Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%
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13.6.33. TTSL CDMA: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	12091	18277	66.15	
1 < S ≤ 2	4290	18277	23.47	
2 < S ≤ 3	1220	18277	6.68	
3 < S ≤ 4	367	18277	2.01	
4 < S ≤ 5	88	18277	0.48	
> 5	221	18277	1.21	
RxLev	Samples	Total	%	
0 to > = -75	13405	19580	68.46	
0 to > = -85	18797	19580	96.00	
0 to > = -95	19580	19580	100.00	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	2366	3011	78.58	
1 < S ≤ 2	590	3011	19.59	
2 < S ≤ 3	53	3011	1.76	
3 < S ≤ 4	1	3011	0.03	
4 < S ≤ 5	0	3011	0.00	
> 5	1	3011	0.03	
RxLev	Samples	Total	%	
0 to > = -75	3303	3303	100.00	
0 to > = -85	3303	3303	100.00	
0 to > = -95	3303	3303	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	20978	21288	98.54	
0-5 (with frequency hopping)	-	-	-	
Total Call Attempt	177			
Blocked Call Rate (<=3%)	0			
Dropped Call Rate (<=2%)	0.00			
Call Setup Success Rate (>=95%)	100.00%			

Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.93			
RxLev	Samples	Total	%	
0 to > = -75	16708	22883	73.01	
0 to > = -85	22100	22883	96.58	
0 to > = -95	22883	22883	100.00	

13.6.34. TTSL CDMA: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	11519	17913	64.31	
1 < S ≤ 2	4151	17913	23.17	
2 < S ≤ 3	1594	17913	8.90	
3 < S ≤ 4	411	17913	2.29	
4 < S ≤ 5	95	17913	0.53	
> 5	143	17913	0.80	
RxLev	Samples	Total	%	
0 to > = -75	11646	19280	60.40	
0 to > = -85	17422	19280	90.36	
0 to > = -95	19280	19280	100.00	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	2399	3008	79.75	
1 < S ≤ 2	330	3008	10.97	
2 < S ≤ 3	82	3008	2.73	
3 < S ≤ 4	58	3008	1.93	
4 < S ≤ 5	34	3008	1.13	
> 5	105	3008	3.49	
RxLev	Samples	Total	%	
0 to > = -75	3299	3299	100.00	
0 to > = -85	3299	3299	100.00	
0 to > = -95	3299	3299	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	20544	20921	98.20	
0-5 (with frequency hopping)	-	-	-	
Total Call Attempt	174			
Blocked Call Rate (<=3%)	0			

Dropped Call Rate (<=2%)	0.00			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00			
RxLev	Samples	Total	%	
0 to > = -75	14945	22579	66.19	
0 to > = -85	20721	22579	91.77	
0 to > = -95	22579	22579	100.00	

13.6.35. TTSL CDMA: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	11627	19912	58.39	
1 < S ≤ 2	5738	19912	28.82	
2 < S ≤ 3	1854	19912	9.31	
3 < S ≤ 4	356	19912	1.79	
4 < S ≤ 5	105	19912	0.53	
> 5	232	19912	1.17	
RxLev	Samples	Total	%	
0 to > = -75	17589	21502	81.80	
0 to > = -85	21003	21502	97.68	
0 to > = -95	21501	21502	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	1195	3132	38.15	
1 < S ≤ 2	1462	3132	46.68	
2 < S ≤ 3	461	3132	14.72	
3 < S ≤ 4	14	3132	0.45	
4 < S ≤ 5	0	3132	0.00	
> 5	0	3132	0.00	
RxLev	Samples	Total	%	
0 to > = -75	3443	3443	100.00	
0 to > = -85	3443	3443	100.00	
0 to > = -95	3443	3443	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	22707	23044	98.54	

0-5 (with frequency hopping)	-	-	-
Total Call Attempt	192		
Blocked Call Rate (<=3%)	0		
Dropped Call Rate (<=2%)	0.00		
Call Setup Success Rate (>=95%)	100.00%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.91		
RxLev	Samples	Total	%
0 to > = -75	21032	24945	84.31
0 to > = -85	24446	24945	98.00
0 to > = -95	24944	24945	100.00

13.6.36. TTSL CDMA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	41197	65253	63.13	
1 < S ≤ 2	16561	65253	25.38	
2 < S ≤ 3	5264	65253	8.07	
3 < S ≤ 4	1207	65253	1.85	
4 < S ≤ 5	322	65253	0.49	
> 5	702	65253	1.08	
RxLev	Samples	Total	%	
0 to > = -75 dbm	52685	70407	74.83	
0 to > = -85 dbm	67267	70407	95.54	
0 to > = -95 dbm	70406	70407	100.00	

Total Calls Attempt (A)	543
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0
Total Calls Established (C)	543
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00
Call Setup Success Rate in % (C*100/A)	100.00

Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.95
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13.6.37. VODAFONE: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	30818	40936	75.28	95.02
1 ≤ S < 2	1453	40936	3.55	
2 ≤ S < 3	1515	40936	3.70	
3 ≤ S < 4	1635	40936	3.99	
4 ≤ S < 5	1720	40936	4.20	
5 ≤ S < 6	1756	40936	4.29	
6 ≤ S	2039	40936	4.98	
RxLev	Samples	Total	%	99.96
0 to > = -75	38896	42452	91.62	
0 to > = -85	42306	42452	99.66	
0 to > = -95	42433	42452	99.96	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6133	6437	95.28	99.53
1 ≤ S < 2	82	6437	1.27	
2 ≤ S < 3	66	6437	1.03	
3 ≤ S < 4	57	6437	0.89	
4 ≤ S < 5	37	6437	0.57	
5 ≤ S < 6	32	6437	0.50	
6 ≤ S	30	6437	0.47	
RxLev	Samples	Total	%	100.00
0 to > = -75	6699	6700	99.99	
0 to > = -85	6700	6700	100.00	
0 to > = -95	6700	6700	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	45304	47373	95.63	
Total Call Attempt	177			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			

Call Setup Success Rate ($\geq 95\%$)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	99.96
0 to ≥ -75	45595	49152	92.76	
0 to ≥ -85	49006	49152	99.70	
0 to ≥ -95	49133	49152	99.96	

13.6.38. VODAFONE: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	38226	50916	75.08	94.65
1 ≤ S < 2	1628	50916	3.20	
2 ≤ S < 3	1803	50916	3.54	
3 ≤ S < 4	2140	50916	4.20	
4 ≤ S < 5	2065	50916	4.06	
5 ≤ S < 6	2329	50916	4.57	
6 ≤ S	2725	50916	5.35	
RxLev	Samples	Total	%	100.00
0 to > = -75	46004	52719	87.26	
0 to > = -85	52497	52719	99.58	
0 to > = -95	52717	52719	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5097	6449	79.04	97.92
1 ≤ S < 2	283	6449	4.39	
2 ≤ S < 3	265	6449	4.11	
3 ≤ S < 4	245	6449	3.80	
4 ≤ S < 5	232	6449	3.60	
5 ≤ S < 6	193	6449	2.99	
6 ≤ S	134	6449	2.08	
RxLev	Samples	Total	%	100.00
0 to > = -75	6674	6675	99.99	
0 to > = -85	6675	6675	100.00	
0 to > = -95	6675	6675	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	54506	57365	95.02	

Total Call Attempt	224		
Blocked Call Rate (<=3%)	0.00%		
Dropped Call Rate (<=2%)	0.00%		
Call Setup Success Rate (>=95%)	100.00%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%		
RxLev	Samples	Total	%
0 to > = -75	52678	59394	88.69
0 to > = -85	59172	59394	99.63
0 to > = -95	59392	59394	100.00

13.6.39. VODAFONE: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	122215	157091	77.80	95.54
1 ≤ S < 2	4936	157091	3.14	
2 ≤ S < 3	5219	157091	3.32	
3 ≤ S < 4	5862	157091	3.73	
4 ≤ S < 5	5753	157091	3.66	
5 ≤ S < 6	6099	157091	3.88	
6 ≤ S	7007	157091	4.46	
RxLev	Samples	Total	%	99.98
0 to > = -75	144779	162910	88.87	
0 to > = -85	161894	162910	99.38	
0 to > = -95	162881	162910	99.98	

Total Calls Attempt (A)	608
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	606
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	99.67%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.87%

13.7. DRIVE TEST OUTCOME SUMMARY

Call Events	Aircel	Airtel	Idea	Rcom GSM	Rcom CDM A	TTSL GSM	TTSL CD MA	Vodaf one	BSNL	MTS
Total Calls Attempt (A)	469	595	454	448	514	494	543	608	596	558
Total Calls Blocked (B)	0	0	3	1	0	0	0	0	6	0
Blocked Call Rate in % (B*100/A)	0.00 %	0.00 %	0.66 %	0.22 %	0.00 %	0	0	0.00 %	1.01 %	0.00 %
Total Calls Established (C)	469	595	451	447	514	494	543	606	590	558
Total Calls Drop (D)	0	0	1	0	1	0	0	0	4	0
Dropped Calls Rate in % (D*100/C)	0.00 %	0.00 %	0.22 %	0.00 %	0.19 %	0.00	0.00	0.00 %	0.68 %	0.00 %
Call Setup Success Rate in % (C*100/A)	100.00 %	100.00 %	99.34 %	99.78 %	100.00 %	100.00 %	100.00	99.67 %	98.99 %	100.00 %
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0 %	100.0 %	99.8 %	99.1 %	100.0 %	100.00 %	99.95	99.87 %	98.9 %	99.90 %

13.8. NOVEMBER: JODHPUR SSA

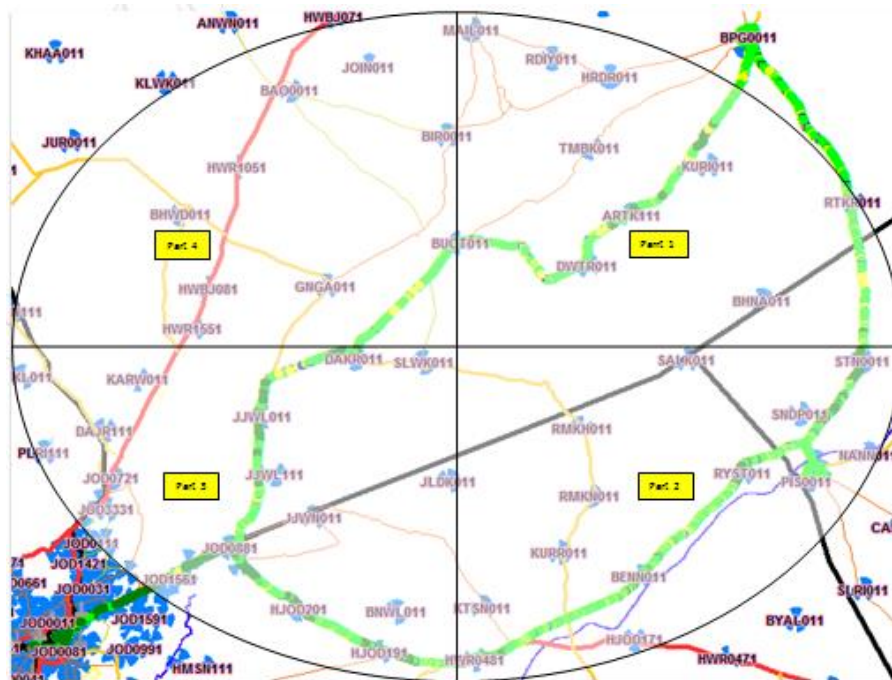
Month	Name of SSA covered	Drive Test Schedule
November/December 2015	Jodhpur	November 30, 2015 to December 2, 2015

13.9. DISTANCE COVERED: JODHPUR SSA

Drive Test Distance Covered	Day 1	Day 2	Day 3
Jodhpur SSA	177 km	231 km	89 km

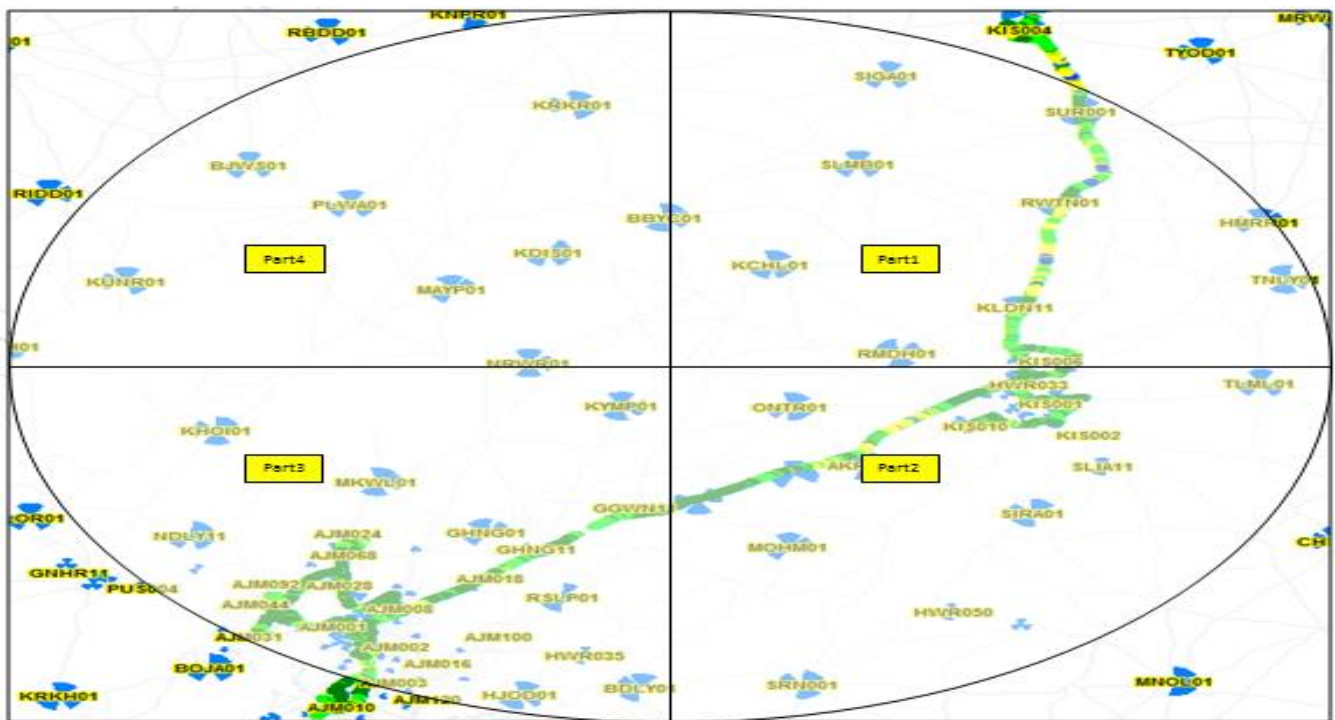
13.10. ROUTE MAP: JODHPUR SSA: DAY 1

SSA: Jodhpur
Outdoor
Route Name
sardarpura ,mandore daiser toll booth mathaniya
HDFC Atm, sabji mandi , govt school , bus stand , railway crossing
umed nagar newaru road osian./ with in city osian : bus stand osian temple, bikhan khor ,nausar road, balaji mandir kuber mandir ,samru station lohawat ./ with in city lohawat : railway station bus stand , highway to lohawat
Indoor
Route Name
osian bus stand



13.11. ROUTE MAP: JODHPUR SSA: DAY 3

SSA: Ajmer
Outdoor
Route Name
sardarpura, barkatullah stadium dps crossing boranda jhawar
police station jhawar , jnu raj school, akliya bombay motor , jda circle , paota , Bhati circle , bus stand , railway station , ashok garden , 12th road jail road, sardarpura bjs colony , Telephone exchange
lordi jaisailmer road , chopasni road
Indoor
Route Name
BSNL EXCHANGE Jodhpur



13.12. DRIVE REPORT ANALYSIS

13.12.1. Aircel: Day 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	35239	48942	72.00	95.17
1 ≤ S < 2	2145	48942	4.38	
2 ≤ S < 3	2336	48942	4.77	
3 ≤ S < 4	2530	48942	5.17	
4 ≤ S < 5	2143	48942	4.38	
5 ≤ S < 6	2185	48942	4.46	
6 ≤ S	2364	48942	4.83	
RxLev	Samples	Total	%	94.91
0 to > = -75	18045	50422	35.79	
0 to > = -85	41730	50422	82.76	
0 to > = -95	47858	50422	94.91	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5609	6417	87.41	99.41
1 ≤ S < 2	203	6417	3.16	
2 ≤ S < 3	222	6417	3.46	
3 ≤ S < 4	157	6417	2.45	
4 ≤ S < 5	108	6417	1.68	
5 ≤ S < 6	80	6417	1.25	

6 ≤ S	38	6417	0.59		
RxLev	Samples	Total	%		
0 to > = -75	681	6683	10.19	99.99	
0 to > = -85	6467	6683	96.77		
0 to > = -95	6682	6683	99.99		
Over All SSA Drive Test Details Day-1					
RxQual	Samples (S)	Total	%	Summary	
0-4 (w/o frequency hopping)/CDMA					
0-5 (with frequency hopping)	52957	55359	95.66		
Total Call Attempt	168				
Blocked Call Rate (<=3%)	0.00%				
Dropped Call Rate (<=2%)	0.00%				
Call Setup Success Rate (>=95%)	100.00%				
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%				
RxLev	Samples	Total	%		
0 to > = -75	18726	57105	32.79		
0 to > = -85	48197	57105	84.40		
0 to > = -95	54540	57105	95.51		
SSA (Urban/Rural)-Day 1					
RxQual		Samples (S)	Total	%	Summary
0 ≤ S < 1		24736	30170	81.99	95.61
1 ≤ S < 2		703	30170	2.33	
2 ≤ S < 3		747	30170	2.48	
3 ≤ S < 4		813	30170	2.69	
4 ≤ S < 5		870	30170	2.88	
5 ≤ S < 6		976	30170	3.24	
6 ≤ S		1325	30170	4.39	
RxLev		Samples	Total	%	93.45
0 to > = -75		10034	31200	32.16	
0 to > = -85		21626	31200	69.31	
0 to > = -95		29155	31200	93.45	
Office Complex SSA (Urban/Rural)- Day 1					
RxQual		Samples (S)	Total	%	Summary
0 ≤ S < 1		6343	6681	94.94	99.58
1 ≤ S < 2		79	6681	1.18	
2 ≤ S < 3		72	6681	1.08	
3 ≤ S < 4		74	6681	1.11	
4 ≤ S < 5		48	6681	0.72	
5 ≤ S < 6		37	6681	0.55	

6 ≤ S	28	6681	0.42	
RxLev	Samples	Total	%	
0 to > = -75	6499	6904	94.13	100.00
0 to > = -85	6899	6904	99.93	
0 to > = -95	6904	6904	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	35498	36851	96.33	
Total Call Attempt	138			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	16533	38104	43.39	
0 to > = -85	28525	38104	74.86	
0 to > = -95	36059	38104	94.63	

13.12.2. AIRCEL :DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	26236	31059	84.47	96.24
1 ≤ S < 2	587	31059	1.89	
2 ≤ S < 3	697	31059	2.24	
3 ≤ S < 4	753	31059	2.42	
4 ≤ S < 5	775	31059	2.50	
5 ≤ S < 6	842	31059	2.71	
6 ≤ S	1169	31059	3.76	
RxLev	Samples	Total	%	95.26
0 to > = -75	7747	32200	24.06	
0 to > = -85	23424	32200	72.75	
0 to > = -95	30673	32200	95.26	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6308	6383	98.83	99.70
1 ≤ S < 2	14	6383	0.22	

2 ≤ S < 3	10	6383	0.16	
3 ≤ S < 4	13	6383	0.20	
4 ≤ S < 5	10	6383	0.16	
5 ≤ S < 6	9	6383	0.14	
6 ≤ S	19	6383	0.30	
RxLev	Samples	Total	%	
0 to > = -75	1410	6666	21.15	99.91
0 to > = -85	6349	6666	95.24	
0 to > = -95	6660	6666	99.91	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	36254	37442	96.83	
Total Call Attempt	148			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	9157	38866	23.56	
0 to > = -85	29773	38866	76.60	
0 to > = -95	37333	38866	96.06	

13.12.3. AIRCEL :DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	34965	51049	68.49	94.77
$1 \leq S < 2$	2548	51049	4.99	
$2 \leq S < 3$	2801	51049	5.49	

3 ≤ S < 4	2974	51049	5.83	
4 ≤ S < 5	2529	51049	4.95	
5 ≤ S < 6	2561	51049	5.02	
6 ≤ S	2671	51049	5.23	
RxLev	Samples	Total	%	98.71
0 to > = -75	28732	52511	54.72	
0 to > = -85	49622	52511	94.50	
0 to > = -95	51835	52511	98.71	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	4942	6370	77.58	98.21
1 ≤ S < 2	296	6370	4.65	
2 ≤ S < 3	289	6370	4.54	
3 ≤ S < 4	294	6370	4.62	
4 ≤ S < 5	262	6370	4.11	
5 ≤ S < 6	173	6370	2.72	
6 ≤ S	114	6370	1.79	
RxLev	Samples	Total	%	100.00
0 to > = -75	5993	6637	90.30	
0 to > = -85	6636	6637	99.98	
0 to > = -95	6637	6637	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	54634	57419	95.15	
Total Call Attempt	169			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	34725	59148	58.71	
0 to > = -85	56258	59148	95.11	
0 to > = -95	58472	59148	98.86	

13.12.4. AIRCEL :OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	113299	150220	75.42	95.76
$1 \leq S < 2$	5793	150220	3.86	
$2 \leq S < 3$	6355	150220	4.23	
$3 \leq S < 4$	6721	150220	4.47	
$4 \leq S < 5$	5827	150220	3.88	
$5 \leq S < 6$	5850	150220	3.89	
$6 \leq S$	6375	150220	4.24	
RxLev	Samples	Total	%	
0 to ≥ -75	62608	155119	40.36	96.92
0 to ≥ -85	134228	155119	86.53	
0 to ≥ -95	150345	155119	96.92	

Total Calls Attempt (A)	485
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B*100/A$)	0.00%
Total Calls Established (C)	485
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D*100/C$)	0.00%
Call Setup Success Rate in % ($C*100/A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.12.5. AIRTEL :DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	406787	512137	79.43	
1 ≤ S < 2	30124	512137	5.88	
2 ≤ S < 3	16927	512137	3.31	
3 ≤ S < 4	19813	512137	3.87	
4 ≤ S < 5	18154	512137	3.54	
5 ≤ S < 6	8131	512137	1.59	
6 ≤ S	12201	512137	2.38	
RxLev	Samples	Total	%	
0 to > = -75	477375	512137	93.21	
0 to > = -85	508540	512137	99.30	
0 to > = -95	512137	512137	100.00	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	75682	87192	86.80	

1 ≤ S < 2	2753	87192	3.16	
2 ≤ S < 3	2800	87192	3.21	
3 ≤ S < 4	3021	87192	3.46	
4 ≤ S < 5	1657	87192	1.90	
5 ≤ S < 6	632	87192	0.72	
6 ≤ S	647	87192	0.74	
RxLev	Samples	Total	%	
0 to > = -75	86803	87192	99.55	
0 to > = -85	87192	87192	100.00	
0 to > = -95	87192	87192	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	577718	599329	96.39	
Total Call Attempt	201			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	564178	599329	94.13	
0 to > = -85	595732	599329	99.40	
0 to > = -95	599329	599329	100.00	

13.12.6. AIRTEL :DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	381922	513734	74.34	
$1 \leq S < 2$	28444	513734	5.54	
$2 \leq S < 3$	22224	513734	4.33	
$3 \leq S < 4$	26756	513734	5.21	
$4 \leq S < 5$	30737	513734	5.98	

5 ≤ S < 6	9333	513734	1.82	
6 ≤ S	14318	513734	2.79	
RxLev	Samples	Total	%	
0 to > = -75	477410	513734	92.93	
0 to > = -85	511324	513734	99.53	
0 to > = -95	513734	513734	100.00	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	97248	98444	98.79	
1 ≤ S < 2	356	98444	0.36	
2 ≤ S < 3	304	98444	0.31	
3 ≤ S < 4	132	98444	0.13	
4 ≤ S < 5	73	98444	0.07	
5 ≤ S < 6	47	98444	0.05	
6 ≤ S	284	98444	0.29	
RxLev	Samples	Total	%	
0 to > = -75	96231	98444	97.75	
0 to > = -85	98339	98444	99.89	
0 to > = -95	98444	98444	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	588196	612178	96.08	
Total Call Attempt	201			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	573641	612178	93.70	
0 to > = -85	609663	612178	99.59	
0 to > = -95	612178	612178	100.00	

13.12.7. AIRTEL :DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	366970	459682	79.83	
1 ≤ S < 2	17372	459682	3.78	
2 ≤ S < 3	21350	459682	4.64	
3 ≤ S < 4	21445	459682	4.67	
4 ≤ S < 5	14842	459682	3.23	
5 ≤ S < 6	8179	459682	1.78	
6 ≤ S	9524	459682	2.07	
RxLev	Samples	Total	%	
0 to > = -75	439718	459682	95.66	
0 to > = -85	448038	459682	97.47	
0 to > = -95	459682	459682	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	70530	82386	85.61	
1 ≤ S < 2	2886	82386	3.50	
2 ≤ S < 3	2618	82386	3.18	
3 ≤ S < 4	3721	82386	4.52	
4 ≤ S < 5	1686	82386	2.05	
5 ≤ S < 6	577	82386	0.70	
6 ≤ S	368	82386	0.45	
RxLev	Samples	Total	%	
0 to > = -75	82369	82386	99.98	
0 to > = -85	82386	82386	100.00	
0 to > = -95	82386	82386	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	523420	542068	96.56	
Total Call Attempt	182			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			

RxLev	Samples	Total	%
0 to > = -75	522087	542068	96.31
0 to > = -85	530424	542068	97.85
0 to > = -95	542068	542068	100.00

13.12.8. AIRTEL :OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	1399139	1753575	79.79	
1 ≤ S < 2	81935	1753575	4.67	
2 ≤ S < 3	66223	1753575	3.78	
3 ≤ S < 4	74888	1753575	4.27	
4 ≤ S < 5	67149	1753575	3.83	
5 ≤ S < 6	26899	1753575	1.53	
6 ≤ S	37342	1753575	2.13	
RxLev	Samples	Total	%	
0 to > = -75	1659906	1753575	94.66	
0 to > = -85	1735819	1753575	98.99	
0 to > = -95	1753575	1753575	100.00	

Total Calls Attempt (A)	584
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	584
Total Calls Drop (D)	0
Dropped Calls Rate in % (D/C)	0.00%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.12.9. BSNL:DAY 1

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	193487	25.32	
1 ≤ S < 2	49000	193487	25.32	
2 ≤ S < 3	47000	193487	24.29	
3 ≤ S < 4	48487	193487	25.06	
4 ≤ S < 5	0	193487	0.00	
5 ≤ S < 6	0	193487	0.00	
6 ≤ S	0	193487	0.00	
RxLev	Samples	Total	%	
0 to > = -75	70000	206053	33.97	
0 to > = -85	68000	206053	33.00	
0 to > = -95	68053	206053	33.03	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	55228	88.72	
1 ≤ S < 2	6228	55228	11.28	
2 ≤ S < 3	0	55228	0.00	
3 ≤ S < 4	0	55228	0.00	
4 ≤ S < 5	0	55228	0.00	
5 ≤ S < 6	0	55228	0.00	
6 ≤ S	0	55228	0.00	
RxLev	Samples	Total	%	
0 to > = -75	19300	57638	33.48	
0 to > = -85	19200	57638	33.31	
0 to > = -95	19138	57638	33.20	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	197669	211770	93.34	
Total Call Attempt	169			
Blocked Call Rate (<=3%)	0.59%			
Dropped Call Rate (<=2%)	1.18%			
Call Setup Success Rate (>=95%)	98.23%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	91.80%			

RxLev	Samples	Total	%
0 to > = -75	84000	247555	33.93
0 to > = -85	81000	247555	32.72
0 to > = -95	82555	247555	33.35

13.12.10. BSNL:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	193487	25.32	
1 ≤ S < 2	49000	193487	25.32	
2 ≤ S < 3	47000	193487	24.29	
3 ≤ S < 4	48487	193487	25.06	
4 ≤ S < 5	0	193487	0.00	
5 ≤ S < 6	0	193487	0.00	
6 ≤ S	0	193487	0.00	
RxLev	Samples	Total	%	
0 to > = -75	70000	206053	33.97	
0 to > = -85	68000	206053	33.00	
0 to > = -95	68053	206053	33.03	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	55228	88.72	
1 ≤ S < 2	6228	55228	11.28	
2 ≤ S < 3	0	55228	0.00	
3 ≤ S < 4	0	55228	0.00	
4 ≤ S < 5	0	55228	0.00	
5 ≤ S < 6	0	55228	0.00	
6 ≤ S	0	55228	0.00	
RxLev	Samples	Total	%	
0 to > = -75	19300	57638	33.48	
0 to > = -85	19200	57638	33.31	
0 to > = -95	19138	57638	33.20	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	197669	211770	93.34	
Total Call Attempt	169			
Blocked Call Rate (<=3%)	0.59%			
Dropped Call Rate (<=2%)	1.18%			
Call Setup Success Rate (>=95%)	98.23%			

Handover Success Rate % (total HO Success * 100/Total HO attempt)	91.80%		
RxLev	Samples	Total	%
0 to > = -75	84000	247555	33.93
0 to > = -85	81000	247555	32.72
0 to > = -95	82555	247555	33.35

13.12.11. BSNL:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	148680	32.96	
1 ≤ S < 2	49000	148680	32.96	
2 ≤ S < 3	47000	148680	31.61	
3 ≤ S < 4	3680	148680	2.48	
4 ≤ S < 5	0	148680	0.00	
5 ≤ S < 6	0	148680	0.00	
6 ≤ S	0	148680	0.00	
RxLev	Samples	Total	%	
0 to > = -75	55000	162256	33.90	
0 to > = -85	54000	162256	33.28	
0 to > = -95	53256	162256	32.82	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	49000	54542	89.84	
1 ≤ S < 2	5542	54542	10.16	
2 ≤ S < 3	0	54542	0.00	
3 ≤ S < 4	0	54542	0.00	
4 ≤ S < 5	0	54542	0.00	
5 ≤ S < 6	0	54542	0.00	
6 ≤ S	0	54542	0.00	
RxLev	Samples	Total	%	
0 to > = -75	19100	56989	33.52	
0 to > = -85	18900	56989	33.16	
0 to > = -95	18989	56989	33.32	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	194000	203222	95.46	
Total Call Attempt	144			

Blocked Call Rate ($\leq 3\%$)	1.38%	
Dropped Call Rate ($\leq 2\%$)	0.69%	
Call Setup Success Rate ($\geq 95\%$)	97.92%	
Handover Success Rate % (total HO Success * 100/Total HO attempt)	94.20%	
RxLev	Samples	Total
0 to ≥ -75	74000	219245
0 to ≥ -85	73000	219245
0 to ≥ -95	72245	219245

13.12.12. BSNL:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	325325	655457	49.63	
$1 \leq S < 2$	118671	655457	18.11	
$2 \leq S < 3$	103904	655457	15.85	
$3 \leq S < 4$	65312	655457	9.96	
$4 \leq S < 5$	16670	655457	2.54	
$5 \leq S < 6$	15125	655457	2.31	
$6 \leq S$	10450	655457	1.59	
RxLev	Samples (S)	Total	%	
0 to ≥ -75	189404	727369	26.04	
0 to ≥ -85	355112	727369	48.82	
0 to ≥ -95	182853	727369	25.14	

Total Calls Attempt (A)	928
Total Calls Blocked (B)	20
Blocked Call Rate in % ($B \times 100/A$)	2.16
Total Calls Established (C)	908
Total Calls Drop (D)	15
Dropped Calls Rate in % ($D \times 100/C$)	1.65
Call Setup Success Rate in % ($C \times 100/A$)	98.35%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	91.80

13.12.13. IDEA:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	31345	33944	92.34	
1 ≤ S < 2	384	33944	1.13	
2 ≤ S < 3	633	33944	1.86	
3 ≤ S < 4	474	33944	1.40	
4 ≤ S < 5	630	33944	1.86	
5 ≤ S < 6	294	33944	0.87	
6 ≤ S	184	33944	0.54	
RxLev	Samples	Total	%	
0 to > = -75	6933	10187	68.06	
0 to > = -85	9890	10187	97.08	
0 to > = -95	10176	10187	99.89	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2364	2494	94.79	
1 ≤ S < 2	15	2494	0.60	
2 ≤ S < 3	30	2494	1.20	
3 ≤ S < 4	45	2494	1.80	
4 ≤ S < 5	30	2494	1.20	
5 ≤ S < 6	10	2494	0.40	
6 ≤ S	0	2494	0.00	
RxLev	Samples	Total	%	
0 to > = -75	3311	3324	99.61	
0 to > = -85	3324	3324	100.00	
0 to > = -95	3324	3324	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	36254	36438	99.50	
Total Call Attempt	110			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			

RxLev	Samples	Total	%
0 to > = -75	10244	13511	75.82
0 to > = -85	13214	13511	97.80
0 to > = -95	13500	13511	99.92

13.12.14. IDEA:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	26571	28412	93.52	
1 ≤ S < 2	295	28412	1.04	
2 ≤ S < 3	374	28412	1.32	
3 ≤ S < 4	343	28412	1.21	
4 ≤ S < 5	410	28412	1.44	
5 ≤ S < 6	240	28412	0.84	
6 ≤ S	179	28412	0.63	
RxLev	Samples	Total	%	
0 to > = -75	7720	10428	74.03	
0 to > = -85	9980	10428	95.70	
0 to > = -95	10418	10428	99.90	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	989	999	99.00	
1 ≤ S < 2	0	999	0.00	
2 ≤ S < 3	5	999	0.50	
3 ≤ S < 4	0	999	0.00	
4 ≤ S < 5	0	999	0.00	
5 ≤ S < 6	5	999	0.50	
6 ≤ S	0	999	0.00	
RxLev	Samples	Total	%	
0 to > = -75	669	998	67.03	
0 to > = -85	998	998	100.00	
0 to > = -95	998	998	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	29232	29411	99.39	
Total Call Attempt	112			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			

Call Setup Success Rate ($\geq 95\%$)	100.00%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%		
RxLev	Samples	Total	%
0 to ≥ -75	8389	11426	73.42
0 to ≥ -85	10978	11426	96.08
0 to ≥ -95	11416	11426	99.91

13.12.15. IDEA:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	32907	38982	84.42	
$1 \leq S < 2$	839	38982	2.15	
$2 \leq S < 3$	1150	38982	2.95	
$3 \leq S < 4$	1259	38982	3.23	
$4 \leq S < 5$	1048	38982	2.69	
$5 \leq S < 6$	983	38982	2.52	
$6 \leq S$	796	38982	2.04	
RxLev	Samples	Total	%	
0 to ≥ -75	11587	13145	88.15	
0 to ≥ -85	13057	13145	99.33	
0 to ≥ -95	13145	13145	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	2489	2614	95.22	
$1 \leq S < 2$	30	2614	1.15	
$2 \leq S < 3$	30	2614	1.15	
$3 \leq S < 4$	20	2614	0.77	
$4 \leq S < 5$	15	2614	0.57	
$5 \leq S < 6$	15	2614	0.57	
$6 \leq S$	15	2614	0.57	
RxLev	Samples	Total	%	
0 to ≥ -75	3304	3326	99.34	
0 to ≥ -85	3326	3326	100.00	
0 to ≥ -95	3326	3326	100.00	

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	40785	41596	98.05%	
Total Call Attempt	135			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	14891	16471	90.41	
0 to > = -85	16383	16471	99.47	
0 to > = -95	16471	16471	100.00	

13.12.16. IDEA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	96665	107445	89.97	
1 ≤ S < 2	1563	107445	1.45	
2 ≤ S < 3	2222	107445	2.07	
3 ≤ S < 4	2141	107445	1.99	
4 ≤ S < 5	2133	107445	1.99	
5 ≤ S < 6	1547	107445	1.44	
6 ≤ S	1174	107445	1.09	
RxLev	Samples	Total	%	
0 to > = -75	33524	41408	80.96	
0 to > = -85	40575	41408	97.99	
0 to > = -95	41387	41408	99.95	

Total Calls Attempt (A)	357
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	357
Total Calls Drop (D)	0

Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%

13.12.17. MTS:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	16358	28139	58.13	
1 ≤ S < 2	9213	28139	32.74	
2 ≤ S < 3	1864	28139	6.62	
3 ≤ S < 4	227	28139	0.81	
4 ≤ S < 5	85	28139	0.30	
5 ≤ S < 6	31	28139	0.11	
6 ≤ S	361	28139	1.28	
RxLev	Samples	Total	%	
0 to > = -75	25254	31755	79.53	
0 to > = -85	30907	31755	97.33	
0 to > = -95	31733	31755	99.93	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3871	5806	66.67	
1 ≤ S < 2	1571	5806	27.06	
2 ≤ S < 3	293	5806	5.05	
3 ≤ S < 4	53	5806	0.91	
4 ≤ S < 5	16	5806	0.28	
5 ≤ S < 6	0	5806	0.00	
6 ≤ S	2	5806	0.03	
RxLev	Samples	Total	%	
0 to > = -75	2494	6358	39.23	
0 to > = -85	6358	6358	100.00	
0 to > = -95	6358	6358	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	33450	33945	98.54	
0-5 (with frequency hopping)				
Total Call Attempt	171			
Blocked Call Rate (<=3%)	0.00%			

Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	27748	38113	72.80	
0 to > = -85	37265	38113	97.78	
0 to > = -95	38091	38113	99.94	

13.12.18. MTS:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	19137	30331	63.09	
1 ≤ S < 2	7700	30331	25.39	
2 ≤ S < 3	2241	30331	7.39	
3 ≤ S < 4	778	30331	2.57	
4 ≤ S < 5	207	30331	0.68	
5 ≤ S < 6	57	30331	0.19	
6 ≤ S	211	30331	0.70	
RxLev	Samples	Total	%	
0 to > = -75	25069	33793	74.18	
0 to > = -85	32559	33793	96.35	
0 to > = -95	33768	33793	99.93	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2660	4878	54.53	
1 ≤ S < 2	1896	4878	38.87	
2 ≤ S < 3	298	4878	6.11	
3 ≤ S < 4	20	4878	0.41	
4 ≤ S < 5	0	4878	0.00	
5 ≤ S < 6	1	4878	0.02	
6 ≤ S	3	4878	0.06	
RxLev	Samples	Total	%	
0 to > = -75	1081	5627	19.21	
0 to > = -85	5626	5627	99.98	
0 to > = -95	5627	5627	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary

0-4 (w/o frequency hopping)/CDMA	34730	35209	98.64	
0-5 (with frequency hopping)				
Total Call Attempt	183			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	26150	39420	66.34	
0 to > = -85	38185	39420	96.87	
0 to > = -95	39395	39420	99.94	

13.12.19. MTS:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	14254	25141	56.70	
1 ≤ S < 2	8658	25141	34.44	
2 ≤ S < 3	1849	25141	7.35	
3 ≤ S < 4	205	25141	0.82	
4 ≤ S < 5	26	25141	0.10	
5 ≤ S < 6	28	25141	0.11	
6 ≤ S	121	25141	0.48	
RxLev	Samples	Total	%	
0 to > = -75	26058	28520	91.37	
0 to > = -85	28038	28520	98.31	
0 to > = -95	28482	28520	99.87	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	2176	4082	53.31	
1 ≤ S < 2	1725	4082	42.26	
2 ≤ S < 3	155	4082	3.80	
3 ≤ S < 4	22	4082	0.54	
4 ≤ S < 5	0	4082	0.00	
5 ≤ S < 6	2	4082	0.05	
6 ≤ S	2	4082	0.05	

RxLev	Samples	Total	%	
0 to > = -75	4651	4690	99.17	
0 to > = -85	4653	4690	99.21	
0 to > = -95	4690	4690	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	29044	29223	99.39	
0-5 (with frequency hopping)				
Total Call Attempt	143			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.92%			
RxLev	Samples	Total	%	
0 to > = -75	30709	33210	92.47	
0 to > = -85	32691	33210	98.44	
0 to > = -95	33172	33210	99.89	

13.12.20. MTS:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	58456	98377	59.42	
1 ≤ S < 2	30763	98377	31.27	
2 ≤ S < 3	6700	98377	6.81	
3 ≤ S < 4	1305	98377	1.33	
4 ≤ S < 5	334	98377	0.34	
5 ≤ S < 6	119	98377	0.12	
6 ≤ S	700	98377	0.71	
RxLev	Samples	Total	%	
0 to > = -75	84607	110743	76.40%	
0 to > = -85	108141	110743	97.65%	
0 to > = -95	110658	110743	99.92%	

Total Calls Attempt (A)	497
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%

Total Calls Established ('C)	497
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.97%

13.12.21. RCOM GSM:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	15937	19092	83.47	
1 ≤ S < 2	569	19092	2.98	
2 ≤ S < 3	581	19092	3.04	
3 ≤ S < 4	564	19092	2.95	
4 ≤ S < 5	514	19092	2.69	
5 ≤ S < 6	337	19092	1.77	
6 ≤ S	590	19092	3.09	
RxLev	Samples	Total	%	
0 to > = -75	7629	18874	40.42	
0 to > = -85	15263	18874	80.87	
0 to > = -95	18642	18874	98.77	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3393	3458	98.12	
1 ≤ S < 2	29	3458	0.84	
2 ≤ S < 3	12	3458	0.35	
3 ≤ S < 4	6	3458	0.17	
4 ≤ S < 5	12	3458	0.35	
5 ≤ S < 6	6	3458	0.17	
6 ≤ S	0	3458	0.00	
RxLev	Samples	Total	%	
0 to > = -75	1515	3459	43.80	
0 to > = -85	3234	3459	93.50	
0 to > = -95	3455	3459	99.88	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	21617	22550	95.86	

Total Call Attempt	197		
Blocked Call Rate (<=3%)	1.52%		
Dropped Call Rate (<=2%)	0.00%		
Call Setup Success Rate (>=95%)	98.48%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%		
RxLev	Samples	Total	%
0 to > = -75	9144	22333	40.94
0 to > = -85	18497	22333	82.82
0 to > = -95	22097	22333	98.94

13.12.22. RCOM GSM:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	10322	11889	86.82	
1 ≤ S < 2	243	11889	2.04	
2 ≤ S < 3	237	11889	1.99	
3 ≤ S < 4	223	11889	1.88	
4 ≤ S < 5	226	11889	1.90	
5 ≤ S < 6	271	11889	2.28	
6 ≤ S	367	11889	3.09	
RxLev	Samples	Total	%	
0 to > = -75	7821	11891	65.77	
0 to > = -85	10897	11891	91.64	
0 to > = -95	11634	11891	97.84	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3093	3277	94.39	
1 ≤ S < 2	75	3277	2.29	
2 ≤ S < 3	61	3277	1.86	
3 ≤ S < 4	28	3277	0.85	
4 ≤ S < 5	7	3277	0.21	
5 ≤ S < 6	5	3277	0.15	
6 ≤ S	8	3277	0.24	
RxLev	Samples	Total	%	
0 to > = -75	3282	3282	100.00	
0 to > = -85	3282	3282	100.00	
0 to > = -95	3282	3282	100.00	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	14515	15166	95.71	
Total Call Attempt	141			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.71%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	11103	15173	73.18	
0 to > = -85	14179	15173	93.45	
0 to > = -95	14916	15173	98.31	

13.12.23. RCOM GSM:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	12682	15305	82.86	
1 ≤ S < 2	356	15305	2.33	
2 ≤ S < 3	392	15305	2.56	
3 ≤ S < 4	430	15305	2.81	
4 ≤ S < 5	422	15305	2.76	
5 ≤ S < 6	403	15305	2.63	
6 ≤ S	620	15305	4.05	
RxLev	Samples	Total	%	
0 to >= -75	11165	15301	72.97	
0 to >= -85	14482	15301	94.65	
0 to >= -95	15276	15301	99.84	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3166	3328	95.13	
1 ≤ S < 2	46	3328	1.38	
2 ≤ S < 3	34	3328	1.02	
3 ≤ S < 4	31	3328	0.93	
4 ≤ S < 5	24	3328	0.72	
5 ≤ S < 6	9	3328	0.27	

6 ≤ S	18	3328	0.54	
RxLev	Samples	Total	%	
0 to > = -75	3336	3336	100.00	
0 to > = -85	3336	3336	100.00	
0 to > = -95	3336	3336	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	17583	18633	94.36	
Total Call Attempt	147			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.56%			
RxLev	Samples	Total	%	
0 to > = -75	14501	18637	77.81	
0 to > = -85	17818	18637	95.61	
0 to > = -95	18612	18637	99.87	

13.12.24. RCOM GSM :OVERALL

Over All SSA Details			
RxQual	Samples (S)	Total	%
$0 \leq S < 1$	48593	56349	86.24
$1 \leq S < 2$	1318	56349	2.34
$2 \leq S < 3$	1317	56349	2.34
$3 \leq S < 4$	1282	56349	2.28
$4 \leq S < 5$	1205	56349	2.14
$5 \leq S < 6$	1031	56349	1.83
$6 \leq S$	1603	56349	2.84
RxLev	Samples	Total	%
0 to ≥ -75	34748	56143	61.9%
0 to ≥ -85	50494	56143	89.9%
0 to ≥ -95	55625	56143	99.1%
Total Calls Attempt (A)	485		
Total Calls Blocked (B)	3		
Blocked Call Rate in % (B*100/A)	0.62%		
Total Calls Established ('C)	482		

Total Calls Drop (D)	1
Dropped Calls Rate in % (D*100/C)	0.21%
Call Setup Success Rate in % (C*100/A)	99.38%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.12.25. RCOM CDMA: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	69052	70310	98.21	
1 ≤ S < 2	62	70310	0.09	
2 ≤ S < 3	557	70310	0.79	
3 ≤ S < 4	92	70310	0.13	
4 ≤ S < 5	118	70310	0.17	
5 ≤ S < 6	41	70310	0.06	
6 ≤ S	388	70310	0.55	
RxLev	Samples	Total	%	
0 to > = -75	32806	70310	46.66	
0 to > = -85	60592	70310	86.18	
0 to > = -95	69572	70310	98.95	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	34083	34083	100.00	
1 ≤ S < 2	0	34083	0.00	
2 ≤ S < 3	0	34083	0.00	
3 ≤ S < 4	0	34083	0.00	
4 ≤ S < 5	0	34083	0.00	
5 ≤ S < 6	0	34083	0.00	
6 ≤ S	0	34083	0.00	
RxLev	Samples	Total	%	
0 to > = -75	34083	34083	100.00	
0 to > = -85	34083	34083	100.00	
0 to > = -95	34083	34083	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	103846	104393	99.48	
Total Call Attempt	134			
Blocked Call Rate (<=3%)	0.00%			

Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	66889	104393	64.07	
0 to > = -85	94675	104393	90.69	
0 to > = -95	103655	104393	99.29	

13.12.26. RCOM CDMA: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	92605	95275	97.20	
1 ≤ S < 2	124	95275	0.13	
2 ≤ S < 3	964	95275	1.01	
3 ≤ S < 4	196	95275	0.21	
4 ≤ S < 5	231	95275	0.24	
5 ≤ S < 6	86	95275	0.09	
6 ≤ S	1069	95275	1.12	
RxLev	Samples	Total	%	
0 to > = -75	36413	95275	38.22	
0 to > = -85	65799	95275	69.06	
0 to > = -95	89179	95275	93.60	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	30464	30485	99.93	
1 ≤ S < 2	1	30485	0.00	
2 ≤ S < 3	17	30485	0.06	
3 ≤ S < 4	1	30485	0.00	
4 ≤ S < 5	2	30485	0.01	
5 ≤ S < 6	0	30485	0.00	
6 ≤ S	0	30485	0.00	
RxLev	Samples	Total	%	
0 to > = -75	114	30485	0.37	
0 to > = -85	25114	30485	82.38	
0 to > = -95	30485	30485	100.00	
Over All SSA Drive Test Details Day-2				

RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	124372	125760	98.90	
Total Call Attempt	133			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	36527	125760	29.05	
0 to > = -85	90913	125760	72.29	
0 to > = -95	119664	125760	95.15	

13.12.27. RCOM CDMA: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	125036	128438	97.35	
1 ≤ S < 2	184	128438	0.14	
2 ≤ S < 3	1630	128438	1.27	
3 ≤ S < 4	240	128438	0.19	
4 ≤ S < 5	349	128438	0.27	
5 ≤ S < 6	89	128438	0.07	
6 ≤ S	910	128438	0.71	
RxLev	Samples	Total	%	
0 to > = -75	86229	128438	67.14	
0 to > = -85	115998	128438	90.31	
0 to > = -95	126641	128438	98.60	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	32678	32933	99.23	
1 ≤ S < 2	20	32933	0.06	
2 ≤ S < 3	187	32933	0.57	
3 ≤ S < 4	15	32933	0.05	
4 ≤ S < 5	22	32933	0.07	
5 ≤ S < 6	4	32933	0.01	
6 ≤ S	7	32933	0.02	
RxLev	Samples	Total	%	

0 to > = -75	32708	32933	99.32
0 to > = -85	32933	32933	100.00
0 to > = -95	32933	32933	100.00

13.12.28. RCOM CDMA: OVERALL

Over All SSA Details			
RxQual	Samples (S)	Total	%
$0 \leq S < 1$	383918	391524	98.06
$1 \leq S < 2$	391	391524	0.10
$2 \leq S < 3$	3355	391524	0.86
$3 \leq S < 4$	544	391524	0.14
$4 \leq S < 5$	722	391524	0.18
$5 \leq S < 6$	220	391524	0.06
$6 \leq S$	2374	391524	0.61
RxLev	Samples	Total	%
0 to > = -75	222353	391524	56.8%
0 to > = -85	334519	391524	85.4%
0 to > = -95	382893	391524	97.8%
Total Calls Attempt (A)	425		
Total Calls Blocked (B)	0		
Blocked Call Rate in % ($B*100/A$)	0.00%		
Total Calls Established (C)	425		
Total Calls Drop (D)	0		
Dropped Calls Rate in % ($D*100/C$)	0.00%		
Call Setup Success Rate in % ($C*100/A$)	100.00%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%		

13.12.29. TTSL GSM:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	35619	42424	83.96%	
$1 < S \leq 2$	1072	42424	2.53%	
$2 < S \leq 3$	1279	42424	3.01%	
$3 < S \leq 4$	1232	42424	2.90%	
$4 < S \leq 5$	1366	42424	3.22%	
> 5	1856	42424	4.37%	
RxLev	Samples	Total	%	
0 to > = -75	18681	34524	54.11%	
0 to > = -85	28659	34524	83.01%	

0 to > = -95	33592	34524	97.30%	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	5106	6669	76.56%	
1 < S ≤ 2	348	6669	5.22%	
2 < S ≤ 3	366	6669	5.49%	
3 < S ≤ 4	308	6669	4.62%	
4 < S ≤ 5	291	6669	4.36%	
> 5	250	6669	3.75%	
RxLev	Samples	Total	%	
0 to > = -75	3072	5480	56.06%	
0 to > = -85	5409	5480	98.70%	
0 to > = -95	5480	5480	100.00%	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	47237	49343	95.73%	
Total Call Attempt	147			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	21753	40004	54.38%	
0 to > = -85	34068	40004	85.16%	

0 to > = -95	39072	40004	97.67%	
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13.12.30. TTSL GSM:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	26850	31288	85.82%	
1 < S ≤ 2	775	31288	2.48%	
2 < S ≤ 3	796	31288	2.54%	
3 < S ≤ 4	834	31288	2.67%	
4 < S ≤ 5	856	31288	2.74%	
> 5	1177	31288	3.76%	
RxLev	Samples	Total	%	
0 to > = -75	13015	27194	47.86%	
0 to > = -85	24109	27194	88.66%	
0 to > = -95	27014	27194	99.34%	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	6444	6763	95.28%	
1 < S ≤ 2	68	6763	1.01%	
2 < S ≤ 3	57	6763	0.84%	
3 < S ≤ 4	76	6763	1.12%	
4 < S ≤ 5	58	6763	0.86%	
> 5	60	6763	0.89%	
RxLev	Samples	Total	%	
0 to > = -75	2212	4918	44.98%	
0 to > = -85	4748	4918	96.54%	
0 to > = -95	4911	4918	99.86%	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	36814	38051	96.75%	

Total Call Attempt	146			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	15227	32112	47.42%	
0 to > = -85	28857	32112	89.86%	
0 to > = -95	31925	32112	99.42%	

13.12.31. TTSL GSM:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	26247	35616	73.69%	
1 < S ≤ 2	1589	35616	4.46%	
2 < S ≤ 3	1639	35616	4.60%	
3 < S ≤ 4	1749	35616	4.91%	
4 < S ≤ 5	1820	35616	5.11%	
> 5	2572	35616	7.22%	
RxLev	Samples	Total	%	
0 to > = -75	26176	31535	83.01%	
0 to > = -85	30426	31535	96.48%	
0 to > = -95	31490	31535	99.86%	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	5463	6745	80.99%	
1 < S ≤ 2	270	6745	4.00%	
2 < S ≤ 3	294	6745	4.36%	
3 < S ≤ 4	291	6745	4.31%	
4 < S ≤ 5	258	6745	3.83%	
> 5	169	6745	2.51%	

RxLev	Samples	Total	%	
0 to > = -75	5724	5726	99.97%	
0 to > = -85	5726	5726	100.00%	
0 to > = -95	5726	5726	100.00%	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	-	-	-	
0-5 (with frequency hopping)	39620	42361	93.53%	
Total Call Attempt	164			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	31900	37261	85.61%	
0 to > = -85	36152	37261	97.02%	
0 to > = -95	37216	37261	99.88%	

13.12.32. TTSL GSM:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	106077	129755	81.75%	
$1 < S \leq 2$	4140	129755	3.19%	
$2 < S \leq 3$	4373	129755	3.37%	
$3 < S \leq 4$	4473	129755	3.45%	

$4 < S \leq 5$	4608	129755	3.55%
> 5	6084	129755	4.69%
RxLev	Samples	Total	%
0 to ≥ -75 dbm	68880	109377	62.97%
0 to ≥ -85 dbm	99077	109377	90.58%
0 to ≥ -95 dbm	108213	109377	98.94%
Total Calls Attempt (A)	457		
Total Calls Blocked (B)	0		
Blocked Call Rate in % ($B*100/A$)	0		
Total Calls Established ('C)	457		
Total Calls Drop (D)	0		
Dropped Calls Rate in % ($D*100/C$)	0.00		
Call Setup Success Rate in % ($C*100/A$)	100.00%		
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%		

13.12.33. TTSL CDMA:DAY1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	8981	13342	67.31	
1 < S ≤ 2	3208	13342	24.04	
2 < S ≤ 3	878	13342	6.58	
3 < S ≤ 4	193	13342	1.45	
4 < S ≤ 5	35	13342	0.26	
> 5	47	13342	0.35	
RxLev	Samples	Total	%	
0 to > = -75	7593	14311	53.06	
0 to > = -85	13501	14311	94.34	
0 to > = -95	14274	14311	99.74	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	2421	3133	77.27	
1 < S ≤ 2	549	3133	17.52	
2 < S ≤ 3	136	3133	4.34	
3 < S ≤ 4	25	3133	0.80	
4 < S ≤ 5	1	3133	0.03	
> 5	1	3133	0.03	
RxLev	Samples	Total	%	
0 to > = -75	1567	3442	45.53	
0 to > = -85	3396	3442	98.66	

0 to > = -95	3442	3442	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	16391	16475	99.49	
0-5 (with frequency hopping)	-	-	-	
Total Call Attempt	139			
Blocked Call Rate (<=3%)	0			
Dropped Call Rate (<=2%)	0.00			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.82			
RxLev	Samples	Total	%	
0 to > = -75	9160	17753	51.60	
0 to > = -85	16897	17753	95.18	
0 to > = -95	17716	17753	99.79	

13.12.34. TTSL CDMA:DAY2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	10400	15548	66.89	
$1 < S \leq 2$	3170	15548	20.39	
$2 < S \leq 3$	1282	15548	8.25	
$3 < S \leq 4$	509	15548	3.27	
$4 < S \leq 5$	136	15548	0.87	
> 5	51	15548	0.33	
RxLev	Samples	Total	%	
0 to ≥ -75	10208	16588	61.54	
0 to ≥ -85	15037	16588	90.65	
0 to ≥ -95	16535	16588	99.68	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	1842	3132	58.81	
$1 < S \leq 2$	1045	3132	33.37	
$2 < S \leq 3$	208	3132	6.64	
$3 < S \leq 4$	27	3132	0.86	
$4 < S \leq 5$	3	3132	0.10	
> 5	7	3132	0.22	

RxLev	Samples	Total	%	
0 to > = -75	132	3428	3.85	
0 to > = -85	3425	3428	99.91	
0 to > = -95	3428	3428	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	18483	18680	98.95	
0-5 (with frequency hopping)	-	-	-	
Total Call Attempt	155			
Blocked Call Rate (<=3%)	0			
Dropped Call Rate (<=2%)	0.00			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00			
RxLev	Samples	Total	%	
0 to > = -75	10340	20016	51.66	
0 to > = -85	18462	20016	92.24	
0 to > = -95	19963	20016	99.74	

13.12.35. TTSL CDMA:DAY3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	11580	15766	73.45	
1 < S ≤ 2	2836	15766	17.99	
2 < S ≤ 3	1039	15766	6.59	
3 < S ≤ 4	224	15766	1.42	
4 < S ≤ 5	41	15766	0.26	
> 5	46	15766	0.29	
RxLev	Samples	Total	%	
0 to > = -75	15308	16988	90.11	
0 to > = -85	16562	16988	97.49	
0 to > = -95	16988	16988	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	2277	3136	72.61	
1 < S ≤ 2	612	3136	19.52	
2 < S ≤ 3	148	3136	4.72	
3 < S ≤ 4	35	3136	1.12	
4 < S ≤ 5	19	3136	0.61	

> 5	45	3136	1.43	
RxLev	Samples	Total	%	
0 to > = -75	3295	3430	96.06	
0 to > = -85	3430	3430	100.00	
0 to > = -95	3430	3430	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	18751	18902	99.20	
0-5 (with frequency hopping)	-	-	-	
Total Call Attempt	157			
Blocked Call Rate (<=3%)	0			
Dropped Call Rate (<=2%)	0.00			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00			
RxLev	Samples	Total	%	
0 to > = -75	18603	20418	91.11	
0 to > = -85	19992	20418	97.91	
0 to > = -95	20418	20418	100.00	

13.12.36. TTSL CDMA: OVERALL

Over All SSA Details					
RxQual	Samples (S)	Total	%	Summary	
0 ≤ S ≤ 1	37501	54057	69.37		
1 < S ≤ 2	11420	54057	21.13		
2 < S ≤ 3	3691	54057	6.83		
3 < S ≤ 4	1013	54057	1.87		
4 < S ≤ 5	235	54057	0.43		
> 5	197	54057	0.36		
RxLev	Samples	Total	%		
0 to > = -75 dbm	38103	58187	65.48		
0 to > = -85 dbm	55351	58187	95.13		
0 to > = -95 dbm	58097	58187	99.85		
Total Calls Attempt (A)	451				

Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0
Total Calls Established ('C)	451
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00
Call Setup Success Rate in % (C*100/A)	100.00
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.95

13.12.37. VODAFONE:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	34628	45934	75.39	94.60
1 ≤ S < 2	1727	45934	3.76	
2 ≤ S < 3	1810	45934	3.94	
3 ≤ S < 4	1817	45934	3.96	
4 ≤ S < 5	1643	45934	3.58	
5 ≤ S < 6	1829	45934	3.98	
6 ≤ S	2480	45934	5.40	
RxLev	Samples	Total	%	100.00
0 to > = -75	38464	47676	80.68	
0 to > = -85	47316	47676	99.24	
0 to > = -95	47675	47676	100.00	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5094	6784	75.09	99.28
1 ≤ S < 2	580	6784	8.55	
2 ≤ S < 3	515	6784	7.59	
3 ≤ S < 4	310	6784	4.57	
4 ≤ S < 5	148	6784	2.18	
5 ≤ S < 6	88	6784	1.30	
6 ≤ S	49	6784	0.72	
RxLev	Samples	Total	%	99.93
0 to > = -75	3100	7171	43.23	
0 to > = -85	7134	7171	99.48	
0 to > = -95	7166	7171	99.93	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	50189	52718	95.20	
Total Call Attempt	205			

Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.57%			
RxLev	Samples	Total	%	99.99
0 to > = -75	41564	54847	75.78	
0 to > = -85	54450	54847	99.28	
0 to > = -95	54841	54847	99.99	

13.12.38. VODAFONE:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	35167	45754	76.86	94.23
1 ≤ S < 2	1328	45754	2.90	
2 ≤ S < 3	1416	45754	3.09	
3 ≤ S < 4	1576	45754	3.44	
4 ≤ S < 5	1596	45754	3.49	
5 ≤ S < 6	2033	45754	4.44	
6 ≤ S	2638	45754	5.77	
RxLev	Samples	Total	%	100.00
0 to > = -75	40516	47538	85.23	
0 to > = -85	47270	47538	99.44	
0 to > = -95	47538	47538	100.00	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6117	6425	95.21	98.55
1 ≤ S < 2	56	6425	0.87	
2 ≤ S < 3	31	6425	0.48	
3 ≤ S < 4	37	6425	0.58	
4 ≤ S < 5	33	6425	0.51	
5 ≤ S < 6	58	6425	0.90	
6 ≤ S	93	6425	1.45	
RxLev	Samples	Total	%	100.00
0 to > = -75	6687	6689	99.97	
	6689	6689	100.00	
0 to > = -95	6689	6689	100.00	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	49448	52179	94.77	
Total Call Attempt	206			
Blocked Call Rate (<=3%)	0.49%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.62%			
RxLev	Samples	Total	%	100.00
0 to > = -75	47203	54227	87.05	
0 to > = -85	53959	54227	99.51	
0 to > = -95	54227	54227	100.00	

13.12.39. VODAFONE:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	31260	49271	63.45	94.96
1 ≤ S < 2	2596	49271	5.27	
2 ≤ S < 3	3384	49271	6.87	
3 ≤ S < 4	3584	49271	7.27	
4 ≤ S < 5	3318	49271	6.73	
5 ≤ S < 6	2645	49271	5.37	
6 ≤ S	2484	49271	5.04	
RxLev	Samples	Total	%	100.00
0 to > = -75	43968	50621	86.86	
0 to > = -85	50466	50621	99.69	
0 to > = -95	50621	50621	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5733	6376	89.92	99.56
1 ≤ S < 2	200	6376	3.14	
2 ≤ S < 3	161	6376	2.53	
3 ≤ S < 4	121	6376	1.90	
4 ≤ S < 5	86	6376	1.35	
5 ≤ S < 6	47	6376	0.74	

6 ≤ S	28	6376	0.44	
RxLev	Samples	Total	%	100.00
0 to > = -75	5621	6644	84.60	
0 to > = -85	6642	6644	99.97	
0 to > = -95	6644	6644	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	53135	55647	95.49	
Total Call Attempt	172			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.38%			
RxLev	Samples	Total	%	100.00
0 to > = -75	49589	57265	86.60	
0 to > = -85	57108	57265	99.73	
0 to > = -95	57265	57265	100.00	

13.12.40. VODAFONE:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	117999	160544	73.50	95.16
1 ≤ S < 2	6487	160544	4.04	
2 ≤ S < 3	7317	160544	4.56	
3 ≤ S < 4	7445	160544	4.64	
4 ≤ S < 5	6824	160544	4.25	
5 ≤ S < 6	6700	160544	4.17	
6 ≤ S	7772	160544	4.84	
RxLev	Samples	Total	%	
0 to > = -75	138356	166339	83.18	100.00
0 to > = -85	165517	166339	99.51	
0 to > = -95	166333	166339	100.00	

Total Calls Attempt (A)	583
Total Calls Blocked (B)	1

Blocked Call Rate in % (B*100/A)	0.17%
Total Calls Established ('C)	581
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	99.66%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.52%

13.13. DRIVE TEST OUTCOME SUMMARY

Call Events	Airce I	Airtel	Idea	Rcom GSM	Rcom CDMA	TTS L GSM	TTS L CDMA	Vodafone	BSNL	MTS
Total Calls Attempt (A)	485	584	357	485	425	457	451	583	928	497
Total Calls Blocked (B)	0	0	0	3	0	0	0	1	20	0
Blocked Call Rate in % (B*100/A)	0.00 %	0.00 %	0.00 %	0.62%	0.00 %	0	0	0.17%	2.16	0.00 %
Total Calls Established ('C)	485	584	357	482	425	457	451	581	908	497
Total Calls Drop (D)	0	0	0	1	0	0	0	0	15	0
Dropped Calls Rate in % (D*100/C)	0.00 %	0.00 %	0.00 %	0.21%	0.00 %	0.00	0.00	0.00%	1.65	0.00 %
Call Setup Success Rate in % (C*100/A)	100.0 0%	100.0 0%	100.0 0%	99.38%	100.0 0%	100.0 0%	100.00	99.66 %	98.3 5%	100.0 0%

Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0 %	100.0 %	100.0 0%	100.0%	100.0 %	100.0 0%	99.9 5%	99.52 %	91.8 0	99.97 %
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13.14. DECEMBER: SIKAR SSA

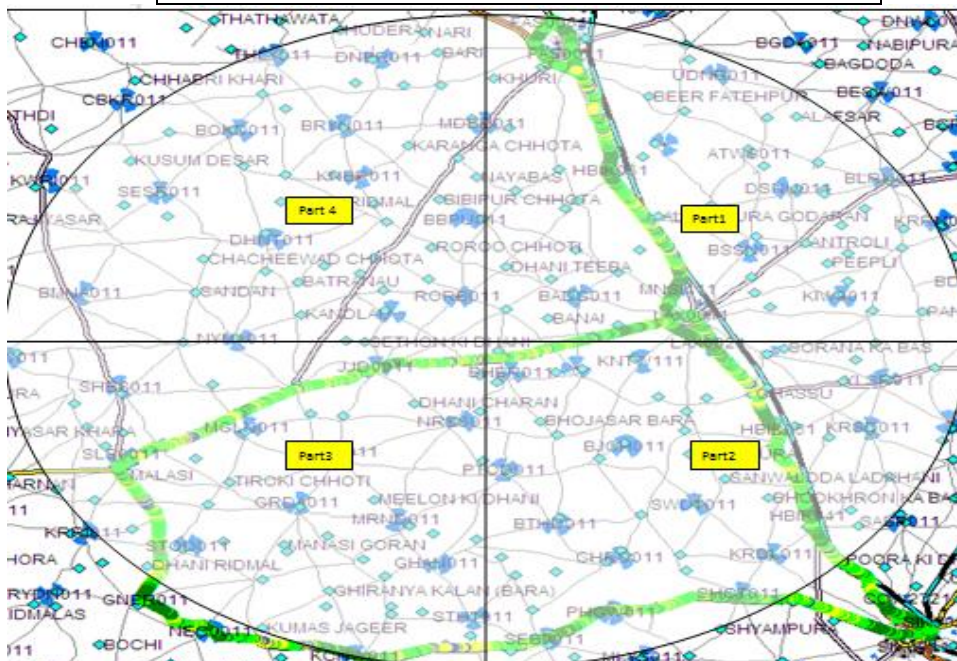
Month	Name of SSA covered	Drive Test Schedule
December 2015	Sikar	December 28, 2015 to December 30, 2015

13.15. DISTANCE COVERED: SIKAR SSA

Drive Test Distance Covered	Day 1	Day 2	Day 3
Sikar SSA	185 km	233 km	150 km

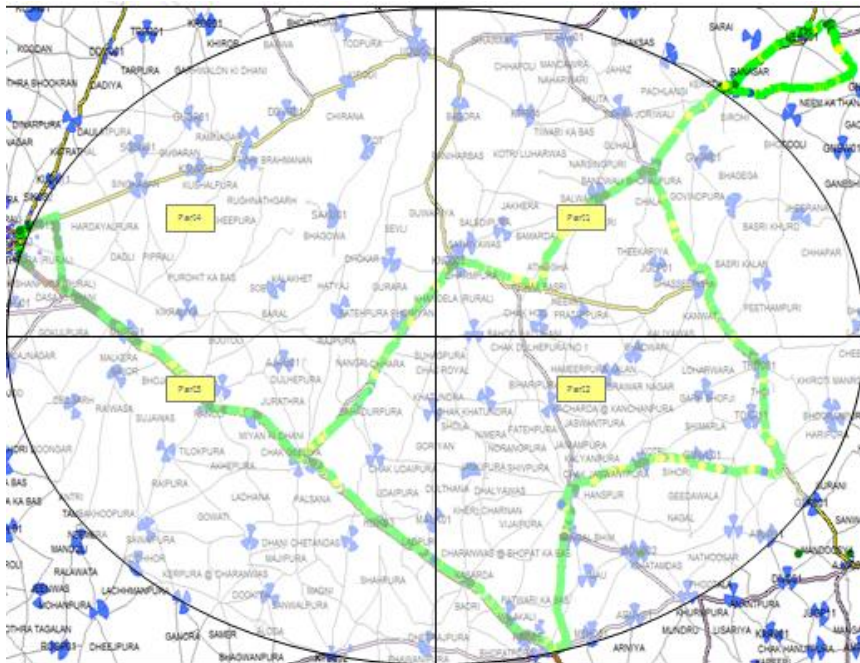
13.16. ROUTE MAP: SIKAR SSA: DAY 1

SSA: Sikar
Outdoor
Route Name
vinayk schhol – churu stand – bypass – devda schhol – bawdi gate – Chhatriya stans – dhanuka hospital – Court – BSNL ofice – petrolpump – jrg cinema – Raghunathpura bypass – Nimawat school.2)Laxmangarh – Modi college-- post office-ghantaghr-sabji mandi-bazar-bus stand-todi college-bypass -petrol pump.
Sikar – sabalpura – bhadhadr – rasidpura – Khuri – Ghassu – laxmnagarh – modi college-manasi-harsawa-fatehpur.Laxmangarh to salsar-sanwali--bhuma--jajod--dhanni-mangluna-juliyasar-salsar.Salasar to sikar--sutod-ganeri-Nechhwa-Kachhwa-Gurjroki dhani-sewad bari-phaglwa-sewa-sihot chhoti-chelasi-bypass-nani-sikar
Fatehpur-rinaw stand-harsaw bada-alakhpura stand-setho ki kothi.Salasar-anjni mata mandir -ratngarh mod-mandir parking-bus stand-sikar mod.
Indoor
Route Name
Salasar



13.17. ROUTE MAP: SIKAR SSA: DAY 2

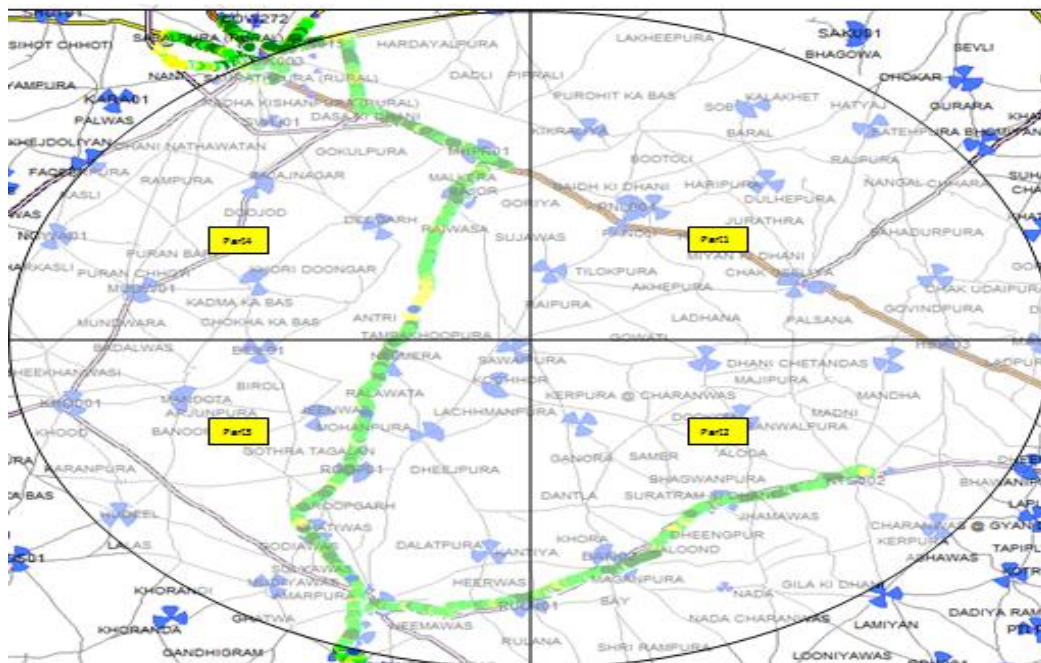
SSA: Sikar
Outdoor
Route Name
Khetri road – khetri mod –college-honda shoroom-krisna mandir-girls school-police thana-patan mod-ganvri road - nim ka thana. 2) Shrimadhampur - - > (A) With in city - - > .Parthivipura road-ganesh temple-bazar-bus stand-bharo mandir-nagaralika-mahatma gandhi pg college-by pass-railway fatk-shrimadhampur
bas-golkul ka bas-khndela-shrimadhampur mod-chikdi-chla-sirohi-nim ka thana-bypass-binnani cement factroy-tool tax-kanwt-thoi-kalyanpura-parthivipura-shrimadhampur-bharni-ringus bypass-bhopatpura-bawri -thikriya-khatu mod-palsan by pass-akehpura-goriya-gokulpura-swami ki dhani -sikar
Khandela-police station-hospital-barsinghpura mod-shrimadhampur mod tiraha-kanwat road-ITI college.B)--Nim ka than industries area-naybas mod-railway crosing-bikner sweets-bsnlooffice-kapil hospital-sbi atm-petrol pump-khetri mod-khetri road
Indoor
Route Name
Neem KA Thana



13.18. ROUTE MAP: SIKAR SSA: DAY 3

SSA: Sikar
Outdoor
Route Name
Railway station-kalyan circle-kalyan college-police line-baajrang kanta-biscope-rni sati mandir-dujod gate-ramlila maidan-dhodh stand-ghantaghar-surjpol gate-jatiya bazar-faglwa petrol pump -tapdiya bagichi-kalyan hospital-court-tanki stand-maru school-khtikan pyau-sablpur power house-tahsil-idgah chowk-salsr stand-palwas road-prince school-shyampura road-bypass road-nani ganv-excelence college-nehru park-salsr road-chandpol gate-post office-icici bank-puliya-nawlgarh road-om tower-kisan colony.
Sikar-kisan colny -nawalgarh road-piprali road-clc-gurukiripa coaching-samrpan coaching-indri colony-piprali bypass.Danta ramgarh-sikar danta road-mansuri car bazar-bai mod-aryn pg college-tagor college-police station-cvinayk store-bazar-tehsil road-civilcourt.Khatu shyamji-Bai road -muridahr dharmshala-bus stand-jinmata mod-palsana mod-sikar mod-ringus roadpsbbj bank -sarkari hospital-khatu
Sikar to Danta ramgarh- - >Sikar – bajor – raiwasa – jinmata – ralwata – udaipuriya -Ropgarh –S- ulyawas-Danta-ramgarh. 2)Highway - - > Danta ramgarh to Khatu - - > Ramgarh-Danta-sajjinpur-Bai-Magnpur-jaloond-Dheengpur-Jhamawas-Khatu

Indoor
Route Name
Khatu Shyam Ji



13.18.1. AIRCEL: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	28202	33814	83.40	97.03
1 ≤ S < 2	817	33814	2.42	
2 ≤ S < 3	888	33814	2.63	
3 ≤ S < 4	964	33814	2.85	
4 ≤ S < 5	986	33814	2.92	
5 ≤ S < 6	953	33814	2.82	
6 ≤ S	1004	33814	2.97	94.89
RxLev	Samples	Total	%	
0 to > = -75	20169	35523	56.78	

0 to > = -85	27679	35523	77.92	
0 to > = -95	33706	35523	94.89	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6161	6714	91.76	99.45
1 ≤ S < 2	129	6714	1.92	
2 ≤ S < 3	138	6714	2.06	
3 ≤ S < 4	102	6714	1.52	
4 ≤ S < 5	85	6714	1.27	
5 ≤ S < 6	62	6714	0.92	
6 ≤ S	37	6714	0.55	
RxLev	Samples	Total	%	
0 to > = -75	6935	6942	99.90	100.00
0 to > = -85	6942	6942	100.00	
0 to > = -95	6942	6942	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	39487	40528	97.43	
Total Call Attempt	153			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	27104	42465	63.83	
0 to > = -85	34621	42465	81.53	
0 to > = -95	40648	42465	95.72	

13.18.2. AIRCEL: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	33607	39498	85.09	97.37

1 ≤ S < 2	888	39498	2.25	
2 ≤ S < 3	969	39498	2.45	
3 ≤ S < 4	983	39498	2.49	
4 ≤ S < 5	1024	39498	2.59	
5 ≤ S < 6	990	39498	2.51	
6 ≤ S	1037	39498	2.63	
RxLev	Samples	Total	%	96.80
0 to > = -75	21492	40786	52.69	
0 to > = -85	33808	40786	82.89	
0 to > = -95	39481	40786	96.80	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	6427	6800	94.51	99.46
1 ≤ S < 2	95	6800	1.40	
2 ≤ S < 3	69	6800	1.01	
3 ≤ S < 4	67	6800	0.99	
4 ≤ S < 5	56	6800	0.82	
5 ≤ S < 6	49	6800	0.72	
6 ≤ S	37	6800	0.54	
RxLev	Samples	Total	%	100.00
0 to > = -75	7159	7172	99.82	
0 to > = -85	7172	7172	100.00	
0 to > = -95	7172	7172	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	45224	46298	97.68	
Total Call Attempt	171			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	28651	47958	59.74	
0 to > = -85	40980	47958	85.45	
0 to > = -95	46653	47958	97.28	

13.18.3. AIRCEL: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	29284	33593	87.17	97.33
1 ≤ S < 2	598	33593	1.78	
2 ≤ S < 3	641	33593	1.91	
3 ≤ S < 4	721	33593	2.15	
4 ≤ S < 5	687	33593	2.05	
5 ≤ S < 6	764	33593	2.27	
6 ≤ S	898	33593	2.67	
RxLev	Samples	Total	%	97.00
0 to > = -75	19355	34514	56.08	
0 to > = -85	29493	34514	85.45	
0 to > = -95	33477	34514	97.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	5985	6769	88.42	96.03
1 ≤ S < 2	65	6769	0.96	
2 ≤ S < 3	83	6769	1.23	
3 ≤ S < 4	112	6769	1.65	
4 ≤ S < 5	114	6769	1.68	
5 ≤ S < 6	141	6769	2.08	
6 ≤ S	269	6769	3.97	
RxLev	Samples	Total	%	100.00
0 to > = -75	3864	7047	54.83	
0 to > = -85	6898	7047	97.89	
0 to > = -95	7047	7047	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	39195	40362	97.11	
Total Call Attempt	150			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	23219	41561	55.87	
0 to > = -85	36391	41561	87.56	
0 to > = -95	40524	41561	97.50	

13.18.4. AIRCEL: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	109666	127188	86.22	97.42
$1 \leq S < 2$	2592	127188	2.04	
$2 \leq S < 3$	2788	127188	2.19	
$3 \leq S < 4$	2949	127188	2.32	
$4 \leq S < 5$	2952	127188	2.32	
$5 \leq S < 6$	2959	127188	2.33	
$6 \leq S$	3282	127188	2.58	
RxLev	Samples	Total	%	
0 to $> = -75$	78974	131984	59.84	96.85
0 to $> = -85$	111992	131984	84.85	
0 to $> = -95$	127825	131984	96.85	

Total Calls Attempt (A)	474
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B*100/A$)	0.00%
Total Calls Established (C)	474
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D*100/C$)	0.00%
Call Setup Success Rate in % ($C*100/A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.18.5. AIRTEL:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	487860	564875	86.36601018	
$1 < S \leq 2$	39552	564875	7.001903076	
$2 < S \leq 3$	15011	564875	2.65740208	
$3 < S \leq 4$	5987	564875	1.059880505	
$4 < S \leq 5$	5667	564875	1.003230803	
> 5	10798	564875	1.911573357	

RxLev	Samples	Total	%	
0 to > = -75	465861	564875	82.47	
0 to > = -85	553435	564875	97.97	
0 to > = -95	564875	564875	100.00	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	69532	72137	96.39	
$1 < S \leq 2$	425	72137	0.59	
$2 < S \leq 3$	241	72137	0.33	
$3 < S \leq 4$	142	72137	0.20	
$4 < S \leq 5$	116	72137	0.16	
> 5	1681	72137	2.33	
RxLev	Samples	Total	%	
0 to > = -75	69246	72137	95.99	
0 to > = -85	72043	72137	99.87	
0 to > = -95	72137	72137	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	624533	637012	98.04	
Total Call Attempt	218			
Blocked Call Rate (<=3%)	0%			

Dropped Call Rate (<=2%)	0%			
Call Setup Success Rate (>=95%)	100%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100%			
RxLev	Samples	Total	%	
0 to > = -75	535107	637012	84.00	
0 to > = -85	625478	637012	98.19	
0 to > = -95	637012	637012	100.00	

13.18.6. AIRTEL:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	489924	580983	84.32674	
1 < S ≤ 2	51234	580983	8.818502	
2 < S ≤ 3	14337	580983	2.467714	
3 < S ≤ 4	6253	580983	1.076279	
4 < S ≤ 5	5319	580983	0.915517	
> 5	13916	580983	2.395251	
RxLev	Samples	Total	%	
0 to > = -75	477216	580983	82.14	
0 to > = -85	565624	580983	97.36	
0 to > = -95	580983	580983	100.00	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S ≤ 1	69120	72686	95.09	
1 < S ≤ 2	712	72686	0.98	

2 < S ≤ 3	370	72686	0.51	
3 < S ≤ 4	234	72686	0.32	
4 < S ≤ 5	109	72686	0.15	
> 5	2141	72686	2.95	
RxLev	Samples	Total	%	
0 to > = -75	67696	72686	93.13	
0 to > = -85	72658	72686	99.96	
0 to > = -95	72686	72686	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	637612	653669	97.54	
Total Call Attempt	228			
Blocked Call Rate (<=3%)	0%			
Dropped Call Rate (<=2%)	0%			
Call Setup Success Rate (>=95%)	100%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100%			
RxLev	Samples	Total	%	
0 to > = -75	544912	653669	83.36	
0 to > = -85	638282	653669	97.65	
0 to > = -95	653669	653669	100.00	

13.18.7. AIRTEL:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	407364	462844	88.01	
$1 < S \leq 2$	22012	462844	4.76	
$2 < S \leq 3$	12123	462844	2.62	
$3 < S \leq 4$	7581	462844	1.64	
$4 < S \leq 5$	5742	462844	1.24	
> 5	8022	462844	1.73	
RxLev	Samples	Total	%	
0 to ≥ -75	386766	462844	83.56	
0 to ≥ -85	458879	462844	99.14	
0 to ≥ -95	462844	462844	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	69538	72347	96.12	
$1 < S \leq 2$	682	72347	0.94	
$2 < S \leq 3$	322	72347	0.45	
$3 < S \leq 4$	187	72347	0.26	
$4 < S \leq 5$	83	72347	0.11	
> 5	1535	72347	2.12	
RxLev	Samples	Total	%	

0 to > = -75	68912	72347	95.25	
0 to > = -85	71968	72347	99.48	
0 to > = -95	72347	72347	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	525634	535191	98.21	
Total Call Attempt	186			
Blocked Call Rate (<=3%)	0%			
Dropped Call Rate (<=2%)	0%			
Call Setup Success Rate (>=95%)	100%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100%			
RxLev	Samples	Total	%	
0 to > = -75	455678	535191	85.14	
0 to > = -85	530847	535191	99.19	
0 to > = -95	535191	535191	100.00	

13.18.8. AIRTEL: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S \leq 1$	1593338	1825872	87.26	
$1 < S \leq 2$	114617	1825872	6.28	
$2 < S \leq 3$	42404	1825872	2.32	

$3 < S \leq 4$	20384	1825872	1.12
$4 < S \leq 5$	17036	1825872	0.93
> 5	38093	1825872	2.09
RxLev	Samples	Total	%
0 to ≥ -75 dbm	1535697	1825872	84.11
0 to ≥ -85 dbm	1794607	1825872	98.29
0 to ≥ -95 dbm	1825872	1825872	100.00

Total Calls Attempt (A)	632
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B*100/A$)	0
Total Calls Established (C)	632
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D*100/C$)	0
Call Setup Success Rate in % ($C*100/A$)	100
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100

13.18.9. IDEA: DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	41807	49188	84.99	
$1 \leq S < 2$	1198	49188	2.44	
$2 \leq S < 3$	1257	49188	2.56	
$3 \leq S < 4$	1405	49188	2.86	
$4 \leq S < 5$	1153	49188	2.34	
$5 \leq S < 6$	1286	49188	2.61	
$6 \leq S$	1082	49188	2.2	

RxLev	Samples	Total	%
0 to > = -75	17172	20160	85.18
0 to > = -85	19974	20160	99.08
0 to > = -95	20159	20160	100

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	1405	1405	100	
1 ≤ S < 2	0	1405	0	
2 ≤ S < 3	0	1405	0	
3 ≤ S < 4	0	1405	0	
4 ≤ S < 5	0	1405	0	
5 ≤ S < 6	0	1405	0	
6 ≤ S	0	1405	0	
RxLev	Samples	Total	%	
0 to > = -75	3318	3324	99.82	
0 to > = -85	3324	3324	100	
0 to > = -95	3324	3324	100	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	49511	50593	97.86	
Total Call Attempt	157			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	20490	23484	87.25	

0 to > = -85	23298	23484	99.21	
0 to > = -95	23483	23484	100	

13.18.10. IDEA: DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	50548	63669	79.39	
$1 \leq S < 2$	2086	63669	3.28	
$2 \leq S < 3$	2701	63669	4.24	
$3 \leq S < 4$	2222	63669	3.49	
$4 \leq S < 5$	2077	63669	3.26	
$5 \leq S < 6$	2179	63669	3.42	
$6 \leq S$	1856	63669	2.92	
RxLev	Samples	Total	%	
0 to > = -75	20245	23166	87.39	
0 to > = -85	22957	23166	99.1	
0 to > = -95	23166	23166	100	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	1155	1530	75.49	
$1 \leq S < 2$	110	1530	7.19	
$2 \leq S < 3$	65	1530	4.25	
$3 \leq S < 4$	70	1530	4.58	
$4 \leq S < 5$	60	1530	3.92	
$5 \leq S < 6$	45	1530	2.94	
$6 \leq S$	25	1530	1.63	
RxLev	Samples	Total	%	
0 to > = -75	3325	3325	100	
0 to > = -85	3325	3325	100	
0 to > = -95	3325	3325	100	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary

0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	63318	65199	97.11	
Total Call Attempt	169			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	23570	26491	88.97	
0 to > = -85	26282	26491	99.21	
0 to > = -95	26491	26491	100	

13.18.11. IDEA: DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	40879	51953	78.68	
$1 \leq S < 2$	1755	51953	3.38	
$2 \leq S < 3$	1662	51953	3.2	
$3 \leq S < 4$	1941	51953	3.74	
$4 \leq S < 5$	1692	51953	3.26	
$5 \leq S < 6$	2020	51953	3.89	
$6 \leq S$	2004	51953	3.86	
RxLev	Samples	Total	%	
0 to > = -75	17299	19428	89.04	
0 to > = -85	19338	19428	99.54	
0 to > = -95	19425	19428	99.98	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	1122	1183	94.84	
$1 \leq S < 2$	10	1183	0.85	
$2 \leq S < 3$	25	1183	2.11	

$3 \leq S < 4$	15	1183	1.27	
$4 \leq S < 5$	5	1183	0.42	
$5 \leq S < 6$	6	1183	0.51	
$6 \leq S$	0	1183	0	
RxLev	Samples	Total	%	
0 to ≥ -75	3289	3307	99.46	
0 to ≥ -85	3307	3307	100	
0 to ≥ -95	3307	3307	100	

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	51132	53136	96.23%	
Total Call Attempt	148			
Blocked Call Rate ($\leq 3\%$)	0.00%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to ≥ -75	20588	22735	90.56	
0 to ≥ -85	22645	22735	99.6	
0 to ≥ -95	22732	22735	99.99	

13.18.12. IDEA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	133234	164810	80.84	
$1 \leq S < 2$	5039	164810	3.06	
$2 \leq S < 3$	5620	164810	3.41	

$3 \leq S < 4$	5568	164810	3.38
$4 \leq S < 5$	4922	164810	2.99
$5 \leq S < 6$	5485	164810	3.33
$6 \leq S$	4942	164810	3
RxLev	Samples	Total	%
0 to ≥ -75	54716	62754	87.19
0 to ≥ -85	62269	62754	99.23
0 to ≥ -95	62750	62754	99.99

Total Calls Attempt (A)	474
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B*100/A$)	0.00%
Total Calls Established ('C)	474
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D*100/C$)	0.00%
Call Setup Success Rate in % ($C*100/A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%

13.18.13. MTS:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	20453	35679	57.33	
$1 \leq S < 2$	9952	35679	27.89	
$2 \leq S < 3$	3175	35679	8.90	
$3 \leq S < 4$	1224	35679	3.43	
$4 \leq S < 5$	362	35679	1.01	
$5 \leq S < 6$	127	35679	0.36	
$6 \leq S$	386	35679	1.08	
RxLev	Samples	Total	%	
0 to ≥ -75	29486	40426	72.94	
0 to ≥ -85	39011	40426	96.50	
0 to ≥ -95	40422	40426	99.99	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	4787	5212	91.85	
$1 \leq S < 2$	323	5212	6.20	
$2 \leq S < 3$	84	5212	1.61	
$3 \leq S < 4$	11	5212	0.21	
$4 \leq S < 5$	3	5212	0.06	

5 ≤ S < 6	4	5212	0.08	
6 ≤ S	0	5212	0.00	
RxLev	Samples	Total	%	
0 to > = -75	7482	7482	100.00	
0 to > = -85	7482	7482	100.00	
0 to > = -95	7482	7482	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	40009	40891	97.84	
0-5 (with frequency hopping)				
Total Call Attempt	205			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	36968	47908	77.16	
0 to > = -85	46493	47908	97.05	
0 to > = -95	47904	47908	99.99	

13.18.14. MTS:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	22480	35750	62.88	
$1 \leq S < 2$	9124	35750	25.52	
$2 \leq S < 3$	2544	35750	7.12	
$3 \leq S < 4$	680	35750	1.90	
$4 \leq S < 5$	262	35750	0.73	
$5 \leq S < 6$	146	35750	0.41	
$6 \leq S$	514	35750	1.44	
RxLev	Samples	Total	%	
0 to ≥ -75	33396	40645	82.17	
0 to ≥ -85	40281	40645	99.10	
0 to ≥ -95	40645	40645	100.00	
Office Complex SSA (Urban/Rural)- Day 2				

RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	3724	5041	73.87	
1 ≤ S < 2	994	5041	19.72	
2 ≤ S < 3	274	5041	5.44	
3 ≤ S < 4	48	5041	0.95	
4 ≤ S < 5	1	5041	0.02	
5 ≤ S < 6	0	5041	0.00	
6 ≤ S	0	5041	0.00	
RxLev	Samples	Total	%	
0 to > = -75	5690	5690	100.00	
0 to > = -85	5690	5690	100.00	
0 to > = -95	5690	5690	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	39868	40791	97.74	
0-5 (with frequency hopping)				
Total Call Attempt	213			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	39086	46335	84.36	
0 to > = -85	45971	46335	99.21	
0 to > = -95	46335	46335	100.00	

13.18.15. MTS:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	17386	29910	58.13	
$1 \leq S < 2$	8699	29910	29.08	
$2 \leq S < 3$	2464	29910	8.24	
$3 \leq S < 4$	634	29910	2.12	

4 ≤ S < 5	257	29910	0.86	
5 ≤ S < 6	106	29910	0.35	
6 ≤ S	364	29910	1.22	
RxLev	Samples	Total	%	
0 to > = -75	31486	33773	93.23	
0 to > = -85	33695	33773	99.77	
0 to > = -95	33773	33773	100.00	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	4874	5700	85.51	
1 ≤ S < 2	706	5700	12.39	
2 ≤ S < 3	99	5700	1.74	
3 ≤ S < 4	21	5700	0.37	
4 ≤ S < 5	0	5700	0.00	
5 ≤ S < 6	0	5700	0.00	
6 ≤ S	0	5700	0.00	
RxLev	Samples	Total	%	
0 to > = -75	6236	6254	99.71	
0 to > = -85	6254	6254	100.00	
0 to > = -95	6254	6254	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA	34883	35610	97.96	
0-5 (with frequency hopping)				
Total Call Attempt	176			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	37722	40027	94.24	
0 to > = -85	39949	40027	99.81	
0 to > = -95	40027	40027	100.00	

13.18.16. MTS:DAY OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	73704	117292	62.84	
$1 \leq S < 2$	29798	117292	25.40	
$2 \leq S < 3$	8640	117292	7.37	
$3 \leq S < 4$	2618	117292	2.23	
$4 \leq S < 5$	885	117292	0.75	
$5 \leq S < 6$	383	117292	0.33	
$6 \leq S$	1264	117292	1.08	
RxLev	Samples	Total	%	
0 to $> = -75$	113776	134270	84.74%	
0 to $> = -85$	132413	134270	98.62%	
0 to $> = -95$	134266	134270	100.00%	

Total Calls Attempt (A)	594
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B*100/A$)	0.00%
Total Calls Established ('C)	594
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D*100/C$)	0.00%
Call Setup Success Rate in % ($C*100/A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%

13.18.17. RCOM GSM:DAY1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	16233	19678	82.49	
$1 \leq S < 2$	564	19678	2.87	
$2 \leq S < 3$	594	19678	3.02	
$3 \leq S < 4$	576	19678	2.93	
$4 \leq S < 5$	485	19678	2.46	
$5 \leq S < 6$	570	19678	2.9	
$6 \leq S$	656	19678	3.33	
RxLev	Samples	Total	%	
0 to $> = -75$	11814	19677	60.04	
0 to $> = -85$	15346	19677	77.99	
0 to $> = -95$	19386	19677	98.52	

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary

$0 \leq S < 1$	3273	3335	98.14	
$1 \leq S < 2$	5	3335	0.15	
$2 \leq S < 3$	5	3335	0.15	
$3 \leq S < 4$	10	3335	0.3	
$4 \leq S < 5$	7	3335	0.21	
$5 \leq S < 6$	24	3335	0.72	
$6 \leq S$	11	3335	0.33	
RxLev	Samples	Total	%	
0 to ≥ -75	3344	3344	100	
0 to ≥ -85	3344	3344	100	
0 to ≥ -95	3344	3344	100	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	22346	23013	97.1	
Total Call Attempt	179			
Blocked Call Rate (<=3%)	0.56%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	99.44%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	15158	23021	65.84	
0 to > = -85	18690	23021	81.19	
0 to > = -95	22730	23021	98.74	

13.18.18. RCOM GSM:DAY2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	17165	21351	80.39	
$1 \leq S < 2$	604	21351	2.83	

$2 \leq S < 3$	720	21351	3.37	
$3 \leq S < 4$	739	21351	3.46	
$4 \leq S < 5$	760	21351	3.56	
$5 \leq S < 6$	595	21351	2.79	
$6 \leq S$	768	21351	3.6	
RxLev	Samples	Total	%	
0 to ≥ -75	11849	21348	55.5	
0 to ≥ -85	17160	21348	80.38	
0 to ≥ -95	20887	21348	97.84	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	2144	3336	64.27	
$1 \leq S < 2$	248	3336	7.43	
$2 \leq S < 3$	313	3336	9.38	
$3 \leq S < 4$	319	3336	9.56	
$4 \leq S < 5$	164	3336	4.92	
$5 \leq S < 6$	103	3336	3.09	
$6 \leq S$	45	3336	1.35	
RxLev	Samples	Total	%	
0 to ≥ -75	3265	3345	97.61	
0 to ≥ -85	3345	3345	100	
0 to ≥ -95	3345	3345	100	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	23874	24687	96.71	
Total Call Attempt	199			
Blocked Call Rate ($\leq 3\%$)	0.50%			
Dropped Call Rate ($\leq 2\%$)	1.01%			
Call Setup Success Rate ($\geq 95\%$)	99.50%			

Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	15114	24693	61.21	
0 to > = -85	20505	24693	83.04	
0 to > = -95	24232	24693	98.13	

13.18.19. RCOM GSM:DAY3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	13364	16184	82.58	
$1 \leq S < 2$	388	16184	2.4	
$2 \leq S < 3$	502	16184	3.1	
$3 \leq S < 4$	555	16184	3.43	
$4 \leq S < 5$	587	16184	3.63	
$5 \leq S < 6$	332	16184	2.05	
$6 \leq S$	456	16184	2.82	
RxLev	Samples	Total	%	
0 to > = -75	11328	16183	70	
0 to > = -85	14795	16183	91.42	
0 to > = -95	15970	16183	98.68	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	3340	3343	99.91	
$1 \leq S < 2$	0	3343	0	
$2 \leq S < 3$	0	3343	0	
$3 \leq S < 4$	0	3343	0	
$4 \leq S < 5$	0	3343	0	
$5 \leq S < 6$	1	3343	0.03	
$6 \leq S$	2	3343	0.06	

RxLev	Samples	Total	%
0 to > = -75	3353	3353	100
0 to > = -85	3353	3353	100
0 to > = -95	3353	3353	100

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	19069	19527	97.65	
Total Call Attempt	156			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	98.56%			
RxLev	Samples	Total	%	
0 to > = -75	14681	19536	75.15	
0 to > = -85	18148	19536	92.9	
0 to > = -95	19323	19536	98.91	

13.18.20. RCOM GSM :OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	55519	67227	82.58	
$1 \leq S < 2$	1809	67227	2.69	
$2 \leq S < 3$	2134	67227	3.17	
$3 \leq S < 4$	2199	67227	3.27	
$4 \leq S < 5$	2003	67227	2.98	
$5 \leq S < 6$	1625	67227	2.42	
$6 \leq S$	1938	67227	2.88	
RxLev	Samples	Total	%	

0 to > = -75	44953	6725 0	66.80 %	
0 to > = -85	57343	6725 0	85.30 %	
0 to > = -95	66285	6725 0	98.60 %	

Total Calls Attempt (A)	534
Total Calls Blocked (B)	2
Blocked Call Rate in % (B*100/A)	0.37%
Total Calls Established (C)	532
Total Calls Drop (D)	2
Dropped Calls Rate in % (D*100/C)	0.38%
Call Setup Success Rate in % (C*100/A)	99.63%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.18.21. RCOM CDMA:DAY1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	165105	167730	98.43	
1 ≤ S < 2	169	167730	0.10	
2 ≤ S < 3	1515	167730	0.90	
3 ≤ S < 4	208	167730	0.12	
4 ≤ S < 5	306	167730	0.18	
5 ≤ S < 6	68	167730	0.04	
6 ≤ S	359	167730	0.21	
RxLev	Samples	Total	%	
0 to > = -75	66679	167730	39.75	
0 to > = -85	114660	167730	68.36	
0 to > = -95	159352	167730	95.01	
Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	32595	33108	98.45	
1 ≤ S < 2	36	33108	0.11	
2 ≤ S < 3	338	33108	1.02	
3 ≤ S < 4	36	33108	0.11	
4 ≤ S < 5	68	33108	0.21	
5 ≤ S < 6	10	33108	0.03	

6 ≤ S	25	33108	0.08	
RxLev	Samples	Total	%	
0 to > = -75	1697	33108	5.13	
0 to > = -85	29856	33108	90.18	
0 to > = -95	33108	33108	100.00	
Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	200002	200838	99.58	
Total Call Attempt	239			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.84%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	68376	200838	34.05	
0 to > = -85	144516	200838	71.96	
0 to > = -95	192460	200838	95.83	

13.18.22. RCOM CDMA:DAY2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	166592	169492	98.29	
1 ≤ S < 2	168	169492	0.10	
2 ≤ S < 3	1266	169492	0.75	
3 ≤ S < 4	226	169492	0.13	
4 ≤ S < 5	331	169492	0.20	
5 ≤ S < 6	93	169492	0.05	
6 ≤ S	816	169492	0.48	
RxLev	Samples	Total	%	
0 to > = -75	50984	169492	30.08	
0 to > = -85	97352	169492	57.44	

0 to > = -95	155745	169492	91.89	
Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	19879	19894	99.92	
1 ≤ S < 2	11	19894	0.06	
2 ≤ S < 3	2	19894	0.01	
3 ≤ S < 4	2	19894	0.01	
4 ≤ S < 5	0	19894	0.00	
5 ≤ S < 6	0	19894	0.00	
6 ≤ S	0	19894	0.00	
RxLev	Samples	Total	%	
0 to > = -75	19609	19894	98.57	
0 to > = -85	19894	19894	100.00	
0 to > = -95	19894	19894	100.00	
Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	188146	189386	99.35	
Total Call Attempt	216			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.93%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	70593	189386	37.27	
0 to > = -85	117246	189386	61.91	
0 to > = -95	175639	189386	92.74	

13.18.23. RCOM CDMA:DAY3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	97575	99682	97.89	
1 ≤ S < 2	145	99682	0.15	
2 ≤ S < 3	1095	99682	1.10	
3 ≤ S < 4	172	99682	0.17	
4 ≤ S < 5	254	99682	0.25	

5 ≤ S < 6	72	99682	0.07	
6 ≤ S	369	99682	0.37	
RxLev	Samples	Total	%	
0 to > = -75	53843	99682	54.01	
0 to > = -85	79151	99682	79.40	
0 to > = -95	98608	99682	98.92	
Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	33792	33796	99.99	
1 ≤ S < 2	1	33796	0.00	
2 ≤ S < 3	3	33796	0.01	
3 ≤ S < 4	0	33796	0.00	
4 ≤ S < 5	0	33796	0.00	
5 ≤ S < 6	0	33796	0.00	
6 ≤ S	0	33796	0.00	
RxLev	Samples	Total	%	
0 to > = -75	33796	33796	100.00	
0 to > = -85	33796	33796	100.00	
0 to > = -95	33796	33796	100.00	
Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	132783	133478	99.48	
Total Call Attempt	136			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	87639	133478	65.66	
0 to > = -85	112947	133478	84.62	
0 to > = -95	132404	133478	99.20	

13.18.24. RCOM CDMA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	515538	523702	98.44	
$1 \leq S < 2$	530	523702	0.10	
$2 \leq S < 3$	4219	523702	0.81	
$3 \leq S < 4$	644	523702	0.12	
$4 \leq S < 5$	959	523702	0.18	
$5 \leq S < 6$	243	523702	0.05	
$6 \leq S$	1569	523702	0.30	
RxLev	Samples	Total	%	
0 to ≥ -75	226608	523702	43.3%	
0 to ≥ -85	374709	523702	71.6%	
0 to ≥ -95	500503	523702	95.6%	

Total Calls Attempt (A)	591
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B \times 100 / A$)	0.00%
Total Calls Established (C)	591
Total Calls Drop (D)	4
Dropped Calls Rate in % ($D \times 100 / C$)	0.68%
Call Setup Success Rate in % ($C \times 100 / A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0%

13.18.25. TTSL GSM:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	28846	31927	90.35%	
$1 \leq S < 2$	472	31927	1.48%	
$2 \leq S < 3$	511	31927	1.60%	
$3 \leq S < 4$	559	31927	1.75%	
$4 \leq S < 5$	509	31927	1.59%	
$5 \leq S < 6$	539	31927	1.69%	
$6 \leq S$	491	31927	1.54%	
RxLev	Samples	Total	%	
0 to ≥ -75	14387	26858	53.57%	
0 to ≥ -85	23794	26858	88.59%	
0 to ≥ -95	26596	26858	99.02%	

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary

$0 \leq S < 1$	6322	6702	94.33%	
$1 \leq S < 2$	56	6702	0.84%	
$2 \leq S < 3$	62	6702	0.93%	
$3 \leq S < 4$	94	6702	1.40%	
$4 \leq S < 5$	89	6702	1.33%	
$5 \leq S < 6$	47	6702	0.70%	
$6 \leq S$	32	6702	0.48%	
RxLev	Samples	Total	%	
0 to ≥ -75	5108	5249	97.31%	
0 to ≥ -85	5248	5249	99.98%	
0 to ≥ -95	5249	5249	100.00%	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	38106	38629	98.65%	
Total Call Attempt	146			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	19495	32107	60.72%	
0 to > = -85	29042	32107	90.45%	
0 to > = -95	31845	32107	99.18%	

13.18.26. TTSL GSM:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	33294	37378	89.07%	
$1 \leq S < 2$	662	37378	1.77%	

$2 \leq S < 3$	669	37378	1.79%	
$3 \leq S < 4$	733	37378	1.96%	
$4 \leq S < 5$	748	37378	2.00%	
$5 \leq S < 6$	645	37378	1.73%	
$6 \leq S$	627	37378	1.68%	
RxLev	Samples	Total	%	
0 to ≥ -75	16858	32478	51.91%	
0 to ≥ -85	28737	32478	88.48%	
0 to ≥ -95	32236	32478	99.25%	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6280	7021	89.45%	
$1 \leq S < 2$	132	7021	1.88%	
$2 \leq S < 3$	142	7021	2.02%	
$3 \leq S < 4$	144	7021	2.05%	
$4 \leq S < 5$	132	7021	1.88%	
$5 \leq S < 6$	121	7021	1.72%	
$6 \leq S$	70	7021	1.00%	
RxLev	Samples	Total	%	
0 to ≥ -75	5800	5864	98.91%	
0 to ≥ -85	5864	5864	100.00%	
0 to ≥ -95	5864	5864	100.00%	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	43702	44399	98.43%	
Total Call Attempt	173			
Blocked Call Rate ($\leq 3\%$)	0.00%			
Dropped Call Rate ($\leq 2\%$)	0.00%			
Call Setup Success Rate ($\geq 95\%$)	100.00%			

Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.07%		
RxLev	Samples	Total	%
0 to > = -75	22658	38342	59.09%
0 to > = -85	34601	38342	90.24%
0 to > = -95	38100	38342	99.37%

13.18.27. TTSL GSM:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	25573	28349	90.21%	
$1 \leq S < 2$	387	28349	1.37%	
$2 \leq S < 3$	437	28349	1.54%	
$3 \leq S < 4$	454	28349	1.60%	
$4 \leq S < 5$	412	28349	1.45%	
$5 \leq S < 6$	427	28349	1.51%	
$6 \leq S$	659	28349	2.32%	
RxLev	Samples	Total	%	
0 to > = -75	12944	24720	52.36%	
0 to > = -85	22252	24720	90.02%	
0 to > = -95	24517	24720	99.18%	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6864	6864	100.00%	
$1 \leq S < 2$	0	6864	0.00%	
$2 \leq S < 3$	0	6864	0.00%	
$3 \leq S < 4$	0	6864	0.00%	
$4 \leq S < 5$	0	6864	0.00%	
$5 \leq S < 6$	0	6864	0.00%	
$6 \leq S$	0	6864	0.00%	
RxLev	Samples	Total	%	
0 to > = -75	1535	4528	33.90%	
0 to > = -85	4525	4528	99.93%	
0 to > = -95	4528	4528	100.00%	

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	34554	35213	98.13%	
Total Call Attempt	144			
Blocked Call Rate (<=3%)	0.69%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	99.31%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	14479	29248	49.50%	
0 to > = -85	26777	29248	91.55%	
0 to > = -95	29045	29248	99.31%	

13.18.27.1. TTSL GSM:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	107179	118241	90.64%	
1 ≤ S < 2	1709	118241	1.45%	
2 ≤ S < 3	1821	118241	1.54%	
3 ≤ S < 4	1984	118241	1.68%	
4 ≤ S < 5	1890	118241	1.60%	
5 ≤ S < 6	1779	118241	1.50%	
6 ≤ S	1879	118241	1.59%	
RxLev	Samples	Total	%	
0 to > = -75	56632	99697	56.80%	
0 to > = -85	90420	99697	90.69%	

0 to > = -95	98990	99697	99.29%	
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Total Calls Attempt (A)	463
Total Calls Blocked (B)	1
Blocked Call Rate in % (B*100/A)	0.22%
Total Calls Established (C)	462
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	99.78%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.67%

13.18.28. TTSL CDMA:DAY 1

SSA (Urban/Rural)-Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	28846	31927	90.35%	
$1 \leq S < 2$	472	31927	1.48%	
$2 \leq S < 3$	511	31927	1.60%	
$3 \leq S < 4$	559	31927	1.75%	
$4 \leq S < 5$	509	31927	1.59%	
$5 \leq S < 6$	539	31927	1.69%	
$6 \leq S$	491	31927	1.54%	
RxLev	Samples	Total	%	
0 to > = -75	14387	26858	53.57%	
0 to > = -85	23794	26858	88.59%	
0 to > = -95	26596	26858	99.02%	

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6322	6702	94.33%	
$1 \leq S < 2$	56	6702	0.84%	
$2 \leq S < 3$	62	6702	0.93%	
$3 \leq S < 4$	94	6702	1.40%	
$4 \leq S < 5$	89	6702	1.33%	

$5 \leq S < 6$	47	6702	0.70%	
$6 \leq S$	32	6702	0.48%	
RxLev	Samples	Total	%	
0 to ≥ -75	5108	5249	97.31%	
0 to ≥ -85	5248	5249	99.98%	
0 to ≥ -95	5249	5249	100.00%	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	38106	38629	98.65%	
Total Call Attempt	146			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	19495	32107	60.72%	
0 to > = -85	29042	32107	90.45%	
0 to > = -95	31845	32107	99.18%	

13.18.29. TTSL CDMA:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	33294	37378	89.07%	
$1 \leq S < 2$	662	37378	1.77%	
$2 \leq S < 3$	669	37378	1.79%	
$3 \leq S < 4$	733	37378	1.96%	
$4 \leq S < 5$	748	37378	2.00%	
$5 \leq S < 6$	645	37378	1.73%	
$6 \leq S$	627	37378	1.68%	
RxLev	Samples	Total	%	
0 to ≥ -75	16858	32478	51.91%	

0 to > = -85	28737	32478	88.48%	
0 to > = -95	32236	32478	99.25%	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6280	7021	89.45%	
$1 \leq S < 2$	132	7021	1.88%	
$2 \leq S < 3$	142	7021	2.02%	
$3 \leq S < 4$	144	7021	2.05%	
$4 \leq S < 5$	132	7021	1.88%	
$5 \leq S < 6$	121	7021	1.72%	
$6 \leq S$	70	7021	1.00%	
RxLev	Samples	Total	%	
0 to > = -75	5800	5864	98.91%	
0 to > = -85	5864	5864	100.00%	
0 to > = -95	5864	5864	100.00%	

Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping)	43702	44399	98.43%	
Total Call Attempt	173			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.07%			
RxLev	Samples	Total	%	
0 to > = -75	22658	38342	59.09%	
0 to > = -85	34601	38342	90.24%	
0 to > = -95	38100	38342	99.37%	

13.18.30. TTSL CDMA:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	25573	28349	90.21%	
$1 \leq S < 2$	387	28349	1.37%	
$2 \leq S < 3$	437	28349	1.54%	
$3 \leq S < 4$	454	28349	1.60%	
$4 \leq S < 5$	412	28349	1.45%	
$5 \leq S < 6$	427	28349	1.51%	
$6 \leq S$	659	28349	2.32%	
RxLev	Samples	Total	%	
0 to ≥ -75	12944	24720	52.36%	
0 to ≥ -85	22252	24720	90.02%	
0 to ≥ -95	24517	24720	99.18%	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6864	6864	100.00%	
$1 \leq S < 2$	0	6864	0.00%	
$2 \leq S < 3$	0	6864	0.00%	
$3 \leq S < 4$	0	6864	0.00%	
$4 \leq S < 5$	0	6864	0.00%	
$5 \leq S < 6$	0	6864	0.00%	
$6 \leq S$	0	6864	0.00%	
RxLev	Samples	Total	%	
0 to ≥ -75	1535	4528	33.90%	
0 to ≥ -85	4525	4528	99.93%	
0 to ≥ -95	4528	4528	100.00%	

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	34554	35213	98.13%	
Total Call Attempt	144			
Blocked Call Rate (<=3%)	0.69%			

Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	99.31%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	
0 to > = -75	14479	29248	49.50%	
0 to > = -85	26777	29248	91.55%	
0 to > = -95	29045	29248	99.31%	

13.18.31. TTSL CDMA: OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	32016	70470	45.43%	
$1 \leq S < 2$	27954	70470	39.67%	
$2 \leq S < 3$	8169	70470	11.59%	
$3 \leq S < 4$	1173	70470	1.66%	
$4 \leq S < 5$	275	70470	0.39%	
$5 \leq S < 6$	88	70470	0.12%	
$6 \leq S$	795	70470	1.13%	
RxLev	Samples	Total	%	
0 to ≥ -75	42211	76064	55.49%	
0 to ≥ -85	65864	76064	86.59%	
0 to ≥ -95	75920	76064	99.81%	

Total Calls Attempt (A)	589
Total Calls Blocked (B)	0
Blocked Call Rate in % ($B \times 100/A$)	0.00%
Total Calls Established (C)	589
Total Calls Drop (D)	0
Dropped Calls Rate in % ($D \times 100/C$)	0.00%
Call Setup Success Rate in % ($C \times 100/A$)	100.00%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	99.98%

13.18.32. VODAFONE:DAY 1

SSA (Urban/Rural)-Day 1

RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	33923	44443	76.33	95.24
$1 \leq S < 2$	1542	44443	3.47	
$2 \leq S < 3$	1658	44443	3.73	
$3 \leq S < 4$	1829	44443	4.12	
$4 \leq S < 5$	1624	44443	3.65	
$5 \leq S < 6$	1752	44443	3.94	
$6 \leq S$	2115	44443	4.76	
RxLev	Samples	Total	%	99.99
0 to ≥ -75	41889	46082	90.9	
0 to ≥ -85	45931	46082	99.67	
0 to ≥ -95	46076	46082	99.99	

Office Complex SSA (Urban/Rural)- Day 1				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	6103	6409	95.23	99.45
$1 \leq S < 2$	77	6409	1.2	
$2 \leq S < 3$	59	6409	0.92	
$3 \leq S < 4$	56	6409	0.87	
$4 \leq S < 5$	44	6409	0.69	
$5 \leq S < 6$	35	6409	0.55	
$6 \leq S$	35	6409	0.55	
RxLev	Samples	Total	%	100
0 to ≥ -75	6687	6695	99.88	
0 to ≥ -85	6695	6695	100	
0 to ≥ -95	6695	6695	100	

Over All SSA Drive Test Details Day-1				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	48702	50852	95.77	
Total Call Attempt	200			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			

Call Setup Success Rate ($\geq 95\%$)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	99.99
0 to ≥ -75	48576	52777	92.04	
0 to ≥ -85	52626	52777	99.71	
0 to ≥ -95	52771	52777	99.99	

13.18.33. VODAFONE:DAY 2

SSA (Urban/Rural)-Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	36149	44963	80.4	95.26
$1 \leq S < 2$	1119	44963	2.49	
$2 \leq S < 3$	1287	44963	2.86	
$3 \leq S < 4$	1311	44963	2.92	
$4 \leq S < 5$	1392	44963	3.1	
$5 \leq S < 6$	1575	44963	3.5	
$6 \leq S$	2130	44963	4.74	
RxLev	Samples	Total	%	99.99
0 to ≥ -75	39032	46550	83.85	
0 to ≥ -85	46045	46550	98.92	
0 to ≥ -95	46545	46550	99.99	

Office Complex SSA (Urban/Rural)- Day 2				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	5095	6415	79.42	94.89
$1 \leq S < 2$	195	6415	3.04	
$2 \leq S < 3$	201	6415	3.13	
$3 \leq S < 4$	205	6415	3.2	
$4 \leq S < 5$	180	6415	2.81	
$5 \leq S < 6$	211	6415	3.29	
$6 \leq S$	328	6415	5.11	
RxLev	Samples	Total	%	100
0 to ≥ -75	6954	6955	99.99	
	6955	6955	100	

0 to > = -95	6955	6955	100	
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Over All SSA Drive Test Details Day-2				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	48920	51378	95.22	
Total Call Attempt	202			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	99.99
0 to > = -75	45986	53505	85.95	
0 to > = -85	53000	53505	99.06	
0 to > = -95	53500	53505	99.99	

13.18.34. VODAFONE:DAY 3

SSA (Urban/Rural)-Day 3				
RxQual	Samples (S)	Total	%	Summary
0 ≤ S < 1	33069	41175	80.31	95.76
1 ≤ S < 2	1199	41175	2.91	
2 ≤ S < 3	1251	41175	3.04	
3 ≤ S < 4	1287	41175	3.13	
4 ≤ S < 5	1232	41175	2.99	
5 ≤ S < 6	1392	41175	3.38	
6 ≤ S	1745	41175	4.24	
RxLev	Samples	Total	%	99.99
0 to > = -75	38536	42530	90.61	
0 to > = -85	42268	42530	99.38	
0 to > = -95	42527	42530	99.99	

Office Complex SSA (Urban/Rural)- Day 3				
RxQual	Samples (S)	Total	%	Summary

$0 \leq S < 1$	5256	6398	82.15	98.2
$1 \leq S < 2$	244	6398	3.81	
$2 \leq S < 3$	233	6398	3.64	
$3 \leq S < 4$	211	6398	3.3	
$4 \leq S < 5$	163	6398	2.55	
$5 \leq S < 6$	176	6398	2.75	
$6 \leq S$	115	6398	1.8	
RxLev	Samples	Total	%	100
0 to ≥ -75	5402	6666	81.04	
0 to ≥ -85	6659	6666	99.89	
0 to ≥ -95	6666	6666	100	

Over All SSA Drive Test Details Day-3				
RxQual	Samples (S)	Total	%	Summary
0-4 (w/o frequency hopping)/CDMA				
0-5 (with frequency hopping	45713	47573	96.09	
Total Call Attempt	164			
Blocked Call Rate (<=3%)	0.00%			
Dropped Call Rate (<=2%)	0.00%			
Call Setup Success Rate (>=95%)	100.00%			
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%			
RxLev	Samples	Total	%	99.99
0 to > = -75	43938	49196	89.31	
0 to > = -85	48927	49196	99.45	
0 to > = -95	49193	49196	99.99	

13.18.35. VODAFONE:OVERALL

Over All SSA Details				
RxQual	Samples (S)	Total	%	Summary
$0 \leq S < 1$	119595	149803	79.83	95.68
$1 \leq S < 2$	4376	149803	2.92	
$2 \leq S < 3$	4689	149803	3.13	
$3 \leq S < 4$	4899	149803	3.27	
$4 \leq S < 5$	4635	149803	3.09	
$5 \leq S < 6$	5141	149803	3.43	
$6 \leq S$	6468	149803	4.32	
RxLev	Samples	Total	%	99.99
0 to ≥ -75	138500	155478	89.08	
0 to ≥ -85	154553	155478	99.41	
0 to ≥ -95	155464	155478	99.99	

Total Calls Attempt (A)	566
Total Calls Blocked (B)	0
Blocked Call Rate in % (B*100/A)	0.00%
Total Calls Established (C)	566
Total Calls Drop (D)	0
Dropped Calls Rate in % (D*100/C)	0.00%
Call Setup Success Rate in % (C*100/A)	99.29%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.00%

13.18.36. DRIVE TEST OUTCOME SUMMARY

Call Events	Airce I	Airtel	Idea	Rcom GSM	Rcom CDM A	TTSL GSM	TTSL CDM A	Vodaf one	BSNL	MTS
Total Calls Attempt (A)	474	632	474	534	591	463	589	566	928	594
Total Calls Blocked (B)	0	0	0	2	0	1	0	0	20	0
Blocked Call Rate in % (B*100/A)	0.00 %	0.00 %	0.00 %	0.37%	0.00 %	0.22 %	0.00 %	0.00% %	2.16 %	0.00 %
Total Calls Established (C)	474	632	474	532	591	462	589	566	908	594
Total Calls Drop (D)	0	0	0	2	4	0	0	0	15	0
Dropped Calls Rate in % (D*100/C)	0.00 %	0.00 %	0.00 %	0.38%	0.68 %	0.00 %	0.00 %	0.00%	1.65	0.00 %
Call Setup Success Rate in % (C*100/A)	100.0 0%	100.0 0%	100.0 0%	99.63%	100.0 0%	100.0 0%	100.0 0%	99.66 %	98.3 5%	100.0 0%
Handover Success Rate % (total HO Success * 100/Total HO attempt)	100.0 %	100.0 %	100.0 0%	100.0%	100.0 %	99.98 %	99.98 %	99.52 %	91.8 0	99.97 %

14. COUNTER DETAILS

SI No.	KPI	Formula with Counter Description
1	CSSR= (No of established Calls / No of Attempted Calls)%	$\text{No of established Calls} = ([\text{Assignment Requests}] - [\text{Failed Assignments (Signaling Channel)}] + [\text{Failed Assignments during MOC on the A Interface (Including Directed Retry)}] + [\text{Failed Assignments during MTC on the A Interface (Including Directed Retry)}] + [\text{Failed Assignments during Emergency Call on the A Interface (Including Directed Retry)}] + [\text{Failed Assignments during Call Re-establishment on the A Interface (Including Directed Retry)}] + [\text{Failed Mode Modify Attempts (MOC) (TCHF)}] + [\text{Failed Mode Modify Attempts (MTC) (TCHF)}] + [\text{Failed Mode Modify Attempts (Emergency Call) (TCHF)}] + [\text{Failed Mode Modify Attempts (Call Re-establishment) (TCHF)}] + [\text{Failed Mode Modify Attempts (MOC) (TCHH)}] + [\text{Failed Mode Modify Attempts (MTC) (TCHH)}] + [\text{Failed Mode Modify Attempts (Call Re-establishment) (TCHH)}]) / [\text{No of Attempted Calls} = ([\text{Assignment Requests (Signaling Channel) (TCH)}] + [\text{Assignment Requests (Signaling Channel) (SDCCH)}] + [\text{Assignment Requests (TCHF Only)}] + [\text{Assignment Requests (TCHH Only)}] + [\text{Assignment Requests (TCHF Preferred, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHH Preferred, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHF or TCHH, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHF Preferred, Channel Type Changeable)}] + [\text{Assignment Requests (TCHH Preferred, Channel Type Changeable)}] + [\text{Assignment Requests (TCHF or TCHH, Channel Type Changeable)}])$
2	SDCCH congestion= (SDCCH Failure/SDCCH attempts)%	$\text{SDCCH Failure} = ([\text{Channel Assignment Failures (All Channels Busy or Channels Unconfigured) in Immediate Assignment Procedure (SDCCH)}] + [\text{Failed Internal Intra-Cell Handovers (No Channel Available) (SDCCH)}] + [\text{Number of Unsuccessful Incoming Internal Inter-Cell Handovers (No Channel Available) (SDCCH)}] + [\text{Failed Incoming External Inter-Cell Handovers (No Channel Available) (SDCCH)}]) / [\text{SDCCH attempts} = ([\text{Channel Assignment Requests in Immediate Assignment Procedure (SDCCH)}] + [\text{Internal Intra-Cell Handover Requests (SDCCH)}] + [\text{Number of Incoming Internal Inter-Cell Handover Requests (SDCCH) (900/850/810-900/850/810)}] + [\text{Number of Incoming Internal Inter-Cell Handover Requests (SDCCH) (1800/1900-1800/1900)}] + [\text{Number of Incoming Internal Inter-Cell Handover Requests (SDCCH) (900/850/810-1800/1900)}] + [\text{Number of Incoming Internal Inter-Cell Handover Requests (SDCCH) (1800/1900-900/850/810)}] + [\text{Incoming External Inter-Cell Handover Requests (SDCCH) (900/850/810-900/850/810)}] + [\text{Incoming External Inter-Cell Handover Requests (SDCCH) (1800/1900-1800/1900)}] + [\text{Incoming External Inter-Cell Handover Requests (SDCCH) (900/850/810-1800/1900)}] + [\text{Incoming External Inter-Cell Handover Requests (SDCCH) (1800/1900-900/850/810)}])$
3	TCH congestion= (TCH Failures /TCH Attempts)%	$\text{TCH Failures} = ([\text{Failed TCH Seizures due to Busy TCH (Signaling Channel)}] + [\text{Failed Assignments (First Assignment, No Channel Available in Assignment Procedure)}] + [\text{Failed Assignments (First Assignment, No Channel Available in Directed Retry Procedure)}] + [\text{Failed Assignments (Reconnection to Old Channels, No Channel Available in Assignment)}] + [\text{Failed Assignments (Reconnection to Old Channels, No Channel Available in Directed Retry)}]) / [\text{TCH Attempts} = ([\text{Assignment Requests (Signaling Channel) (TCH)}] + [\text{Assignment Requests (Signaling Channel) (SDCCH)}] + [\text{Assignment Requests (TCHF Only)}] + [\text{Assignment Requests (TCHH Only)}] + [\text{Assignment Requests (TCHF Preferred, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHH Preferred, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHF or TCHH, Channel Type Unchangeable)}] + [\text{Assignment Requests (TCHF Preferred, Channel Type Changeable)}] + [\text{Assignment Requests (TCHH Preferred, Channel Type Changeable)}] + [\text{Assignment Requests (TCHF or TCHH, Channel Type Changeable)}])$
4	Call Drop Rate= (The total no of dropped calls*100)/Total no of calls successfully established (where traffic channel is allotted)	$\text{The total no of dropped calls} = ([\text{Call Drops on Radio Interface in Stable State (Traffic Channel)}] + [\text{Call Drops on Radio Interface in Handover State (Traffic Channel)}] + [\text{Call Drops Due to No MR from MS for a Long Time (Traffic Channel)}] + [\text{Call Drops due to Abis Terrestrial Link Failure (Traffic Channel)}] + [\text{Call Drops due to Equipment Failure (Traffic Channel)}] + [\text{Call Drops due to Forced Handover (Traffic Channel)}] + [\text{Call Drops due to local switching Start Failure}] + [\text{Call Drops$

		due to Failures to Return to Normal Call from local switching)]/Total no of calls successfully established (where traffic channel is allotted) = ([Assignment Requests]-([Failed Assignments (Signaling Channel)]+[Failed Assignments during MOC on the A Interface (Including Directed Retry)]+[Failed Assignments during MTC on the A Interface (Including Directed Retry)]+[Failed Assignments during Emergency Call on the A Interface (Including Directed Retry)]+[Failed Assignments during Call Re-establishment on the A Interface (Including Directed Retry)]+[Failed Mode Modify Attempts (MOC) (TCHF)]+[Failed Mode Modify Attempts (MTC) (TCHF)]+[Failed Mode Modify Attempts (Emergency Call) (TCHF)]+[Failed Mode Modify Attempts (Call Re-establishment) (TCHF)]+[Failed Mode Modify Attempts (MOC) (TCHH)]+[Failed Mode Modify Attempts (MTC) (TCHH)]+[Failed Mode Modify Attempts (Call Re-establishment) (TCHH)])
5	Call Drop Rate= (No of cells having call drop rate >3% during CBBH in a month*100)/Total no of cells in the licensed service area	Above formula with counters being used in CBBH.
6	Connection with good quality voice= (Connection with good quality voice/Total voice samples)%	<i>Connection with good quality voice</i> = ((Number of MRs on Downlink TCHF (Receive Quality Rank 0)+Number of MRs on Downlink TCHF (Receive Quality Rank 1)+Number of MRs on Downlink TCHF (Receive Quality Rank 2)+Number of MRs on Downlink TCHF (Receive Quality Rank 3)+Number of MRs on Downlink TCHF (Receive Quality Rank 4)+Number of MRs on Downlink TCHF (Receive Quality Rank 5)+Number of MRs on Downlink TCHH (Receive Quality Rank 0)+Number of MRs on Downlink TCHH (Receive Quality Rank 1)+Number of MRs on Downlink TCHH (Receive Quality Rank 2)+Number of MRs on Downlink TCHH (Receive Quality Rank 3)+Number of MRs on Downlink TCHH (Receive Quality Rank 4)+Number of MRs on Downlink TCHH (Receive Quality Rank 5)) /Total voice samples= ((Number of MRs on Downlink TCHF (Receive Quality Rank 0)+Number of MRs on Downlink TCHF (Receive Quality Rank 1)+Number of MRs on Downlink TCHF (Receive Quality Rank 2)+Number of MRs on Downlink TCHF (Receive Quality Rank 3)+Number of MRs on Downlink TCHF (Receive Quality Rank 4)+Number of MRs on Downlink TCHF (Receive Quality Rank 5)+Number of MRs on Downlink TCHF (Receive Quality Rank 6)+Number of MRs on Downlink TCHF (Receive Quality Rank 7)+Number of MRs on Downlink TCHH (Receive Quality Rank 0)+Number of MRs on Downlink TCHH (Receive Quality Rank 1)+Number of MRs on Downlink TCHH (Receive Quality Rank 2)+Number of MRs on Downlink TCHH (Receive Quality Rank 3)+Number of MRs on Downlink TCHH (Receive Quality Rank 4)+Number of MRs on Downlink TCHH (Receive Quality Rank 5)+Number of MRs on Downlink TCHH (Receive Quality Rank 6)+Number of MRs on Downlink TCHH (Receive Quality Rank 7))

14.1. Ericsson

SI No.	KPI	Ericsson
1	CSSR= (No of established Calls / No of Attempted Calls)%	CSSR (No of established Calls / No of Attempted Calls)=(TCASSALL/TASSALL)*100
2	SDCCH congestion= (SDCCH Failure/SDCCH attempts)%	SDCCH congestion (SDCCH Failure/SDCCH attempts)% = (CCONGS/CCALLS)*100
3	TCH congestion= (TCH Failures /TCH Attempts)%	TCH congestion (TCH Failures /TCH Attempts)%=(CNRELCONG+TNRELCONG)/TASSALL)*100
4	Call Drop Rate= (The total no of dropped calls*100)/Total no of calls successfully established (where traffic channel is allotted)	Call Drop Rate (Total no dropped calls/No of established calls)%=(TNDROP/TCASSALL)*100
5	Call Drop Rate= (No of cells having call drop rate >3% during CBBH in a month*100)/Total no of cells in the licensed service area	Above formula with counters being used in CBBH.

6	Connection with good quality voice= (Connection with good quality voice/Total voice samples)%	Connection with good quality voice (Connection with good quality voice samples 0-5 /Total voice samples)= 100 * (QUAL50DL + QUAL40DL + QUAL30DL + QUAL20DL + QUAL10DL + QUAL00DL) / (QUAL70DL + QUAL60DL + QUAL50DL + QUAL40DL + QUAL30DL + QUAL20DL + QUAL10DL + QUAL00DL)
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Ericsson Counters

Counter	Counter Description
TCASSALL	Number of assignment complete messages on TCH for all MS classes
TASSALL	Number of first assignment attempts on TCH for all MS classes.
CNRELCONG	Number of released connections on SDCCH due to TCH or Transcoder (TRA) congestion.
TNRELCONG	Number of released TCH signalling connections due to transcoder resource congestion during immediate assignment on TCH
CCONGS	Congestion counter for SDCCH. Stepped per congested allocation attempt.
CCALLS	Channel allocation attempt counter on SDCCH.
TNDROP	The total number of dropped TCH Connections.
QUAL00DL	Number of quality 0 reported on downlink.
QUAL10DL	Number of quality 1 reported on downlink.
QUAL20DL	Number of quality 2 reported on downlink.
QUAL30DL	Number of quality 3 reported on downlink.
QUAL40DL	Number of quality 4 reported on downlink.
QUAL50DL	Number of quality 5 reported on downlink.
QUAL60DL	Number of quality 6 reported on downlink.
QUAL70DL	Number of quality 7 reported on downlink

14.2. NSN (Nokia Siemens Network)

SI N O.	KPI	NSN
1	CSSR= (No of established Calls / No of Attempted Calls)%	$CSSR = 100 - 100 * ((SDCCH_BUSY_ATT) - (TCH_SEIZ_DUE_SDCCH_CON) + (SDCCH_RADIO_FAIL) + (SDCCH_RF_OLD_HO) + (SDCCH_USER_ACT) + (SDCCH_BCSU_RES_ET) + (SDCCH_NETW_ACT) + (SDCCH_BTS_FAIL) + (SDCCH_LAPD_FAIL) + (BLCK_8I_NOM) / ((CH_REQ_MSG_REC) + (PACKET_CH_REQ)) - ((GHOST_CCCH_RES) - (REJ_SEIZ_ATT_DUE_DIST))$
2	SDCCH congestion= (SDCCH Failure/SDCCH attempts)%	$SDCCH \text{ congestion} = (sdccch_busy_att - .tch_seiz_due_sdccch_con) / ((CH_REQ_MSG_REC) + (PACKET_CH_REQ)) - ((GHOST_CCCH_RES) - (REJ_SEIZ_ATT_DUE_DIST))$
3	TCH congestion= (TCH Failures /TCH Attempts)%	$TCH \text{ congestion} = BLCK_8I_NOM / ((TCH_NORM_SEIZ) + (MSC_I_SDCCH_TCH_AT) + (BSC_I_SDCCH_TCH_AT))$
4	Call Drop Rate= (The total no of dropped calls*100)/Total no of calls successfully established (where traffic channel is allotted)	$TCH \text{ Drop} = (drop_after_tch_assign) - (tch_re_est_release) / ((TCH_NORM_SEIZ) + (MSC_I_SDCCH_TCH_AT) + (BSC_I_SDCCH_TCH_AT))$
5	Call Drop Rate= (No of cells having call drop rate >3% during CBBH in a month*100)/Total no of cells in the licensed service area	Above formula with counters being used in CBBH.
6	Connection with good quality voice= (Connection with good quality voice/Total voice samples)%	Connection with good quality voice= (FREQ_DL_QUAL0+FREQ_DL_QUAL1+FREQ_DL_QUAL2+FREQ_DL_QUAL3+FREQ_DL_QUAL4+FREQ_DL_QUAL5) / (FREQ_DL_QUAL0+FREQ_DL_QUAL1+FREQ_DL_QUAL2+FREQ_DL_QUAL3+FREQ_DL_QUAL4+FREQ_DL_QUAL5+FREQ_DL_QUAL6+FREQ_DL_QUAL7)

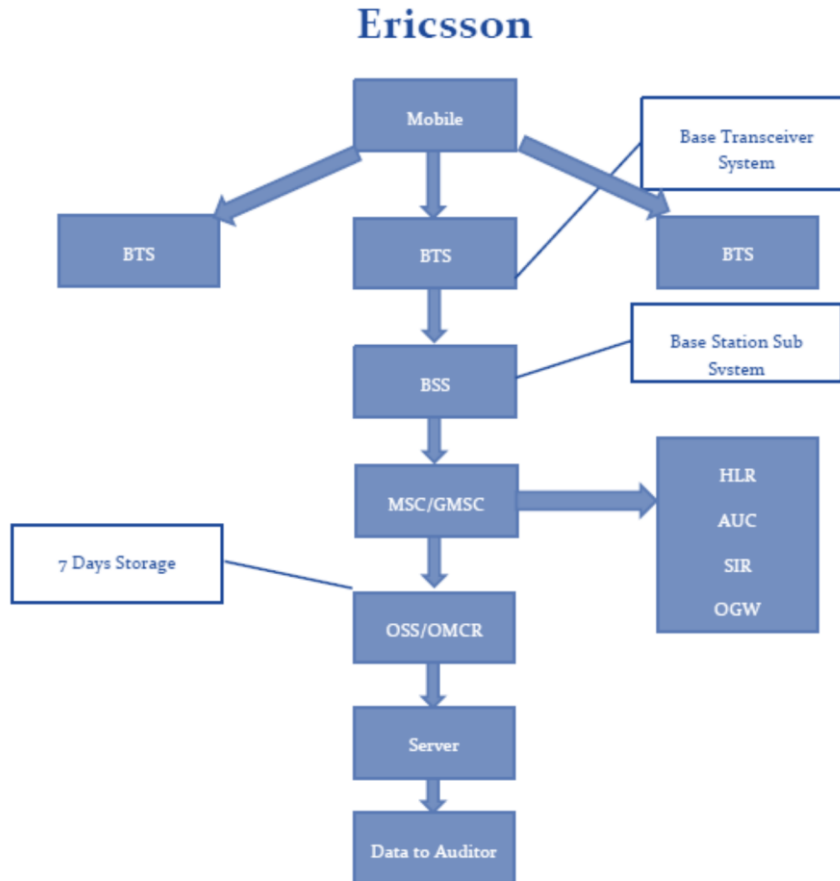
14.3. Huawei

SR NO	KPI	HUAWEI FORMULA
1	CALL SETUP SUCCES (NUM)	[Successful CS IS-95 Orig Call Setups + Successful CS IS-2000 Orig Call Setups + Successful CS IS-95 Term Call Setups + Successful CS IS-2000 Term Call Setups] ([1157628567] + [1157628587] + [1157628568] + [1157628588])
2	CALL SETUP SUCCES (DEN)	[CS IS-95 Orig Attempts + CS IS-2000 Orig Attempts + CS IS-95 Term Attempts + CS IS-2000 Term Attempts] ([1157628553] + [1157628573] + [1157628554] + [1157628574])

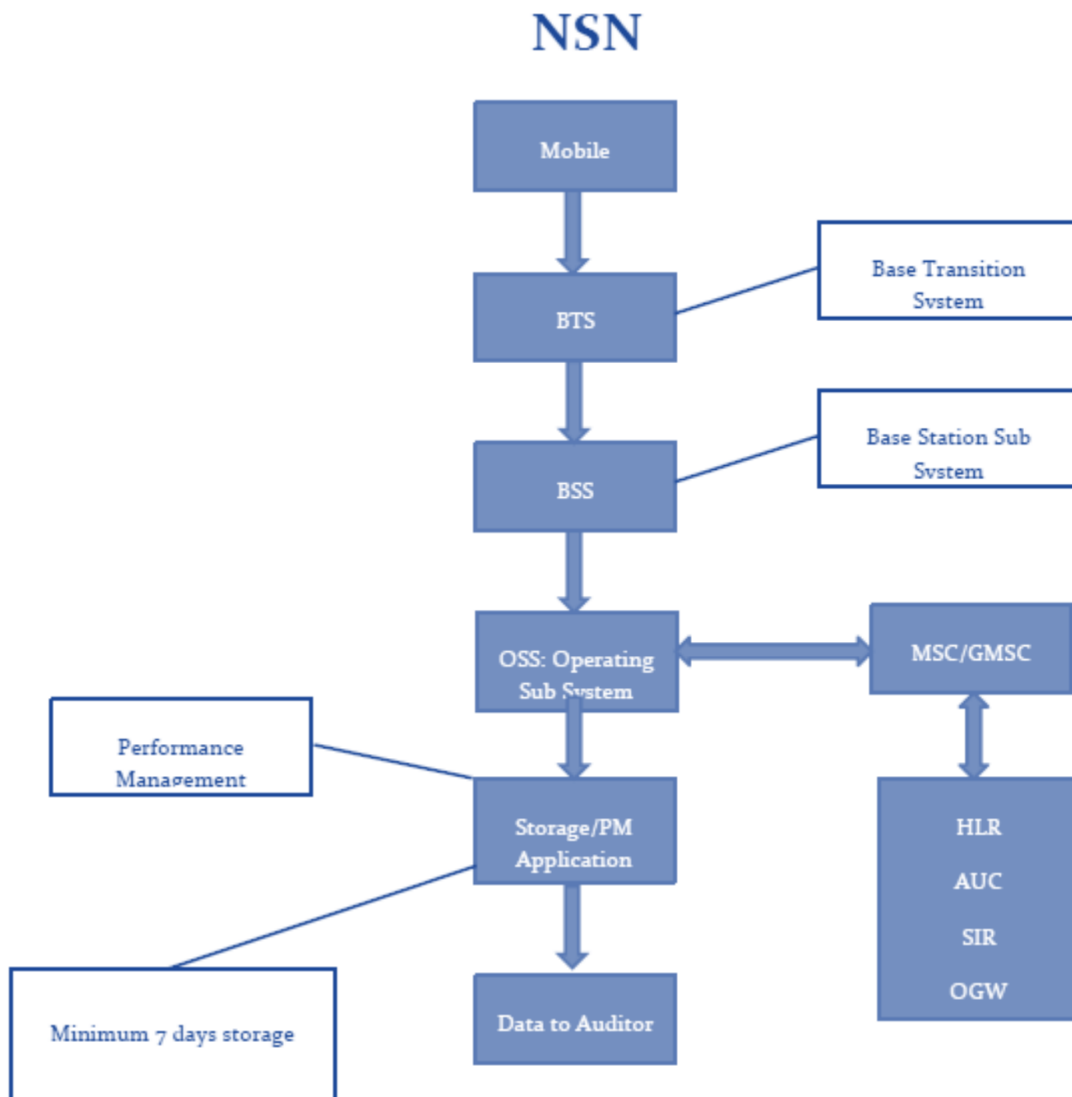
3	CALL SETUP SUCCESS RATE (%)	CALL SETUP SUCCES (NUM) / CALL SETUP SUCCES (DEN) * 100\
4	CALL DROP RATE (NUM)	[CS IS-95 Call Drops (Too many Erasure frames) + CS IS-2000 Call Drops (Too many Erasure frames) + CS IS-95 Call Drops (No reverse frame received) + CS IS-2000 Call Drops (No reverse frame received) + CS IS-95 Call Drops (Abis interface abnormal) + CS IS-2000 Call Drops (Abis interface abnormal) + CS IS-95 Call Drops (A2 interface abnormal) + CS IS-2000 Call Drops (A2 interface abnormal) + CS IS-95 Call Drops (HHO fail) + CS IS-2000 Call Drops (HHO fail) + CS IS-95 Call Drops (Other causes) + CS IS-2000 Call Drops (Other causes)] ([1157628608] + [1157628614] + [1157628609] + [1157628615] + [1157628610] + [1157628616] + [1157628611] + [1157628617] + [1157628612] + [1157628618] + [1157628613] + [1157628619])
5	CALL DROP RATE (DEN)	[Successful CS IS-95 Orig Call Setups + Successful CS IS-2000 Orig Call Setups + Successful CS IS-95 Term Call Setups + Successful CS IS-2000 Term Call Setups + CS IS-95 Successful Incoming Hard HO's + CS IS-2000 Successful Incoming Hard HO's] [1157628619] x 100/([1157628567] + [1157628587] + [1157628568] + [1157628588] + [1157628569] + [1157628589])]
6	Call DROP Rate	CALL DROP RATE (NUM) / CALL DROP RATE (DEN) * 100\
7	RF BLOCK RATE (NUM)	{[(TCH Assignment Requests-CS Orig-IS95[Times] + TCH Assignment Requests-CS Orig-IS2000[Times] + TCH Assignment Requests-CS Term-IS95[Times] + TCH Assignment Requests-CS Term-IS2000[Times]) - (Successful TCH Assignments-CS Orig-IS95[Times] + Successful TCH Assignments-CS Orig-IS2000[Times] + Successful TCH Assignments-CS Term-IS95[Times] + Successful TCH Assignments-CS Term-IS2000[Times])]} / ([1157628621 + 1157628628 + 1157628635 + 1157628642])
8	RF BLOCK RATE (DEN)	{[(TCH Assignment Requests-CS Orig-IS95[Times] + TCH Assignment Requests-CS Orig-IS2000[Times] + TCH Assignment Requests-CS Term-IS95[Times] + TCH Assignment Requests-CS Term-IS2000[Times])]} / ([1157628621 + 1157628628 + 1157628635 + 1157628642])
9	RF BLOCK RATE	RF BLOCK RATE (NUM) / RF BLOCK RATE (DEN) *100
10	Call Quality (RFER)	CS Reverse Link Average FER of Carrier[%

15. BLOCK SCHEMATIC DIAGRAM

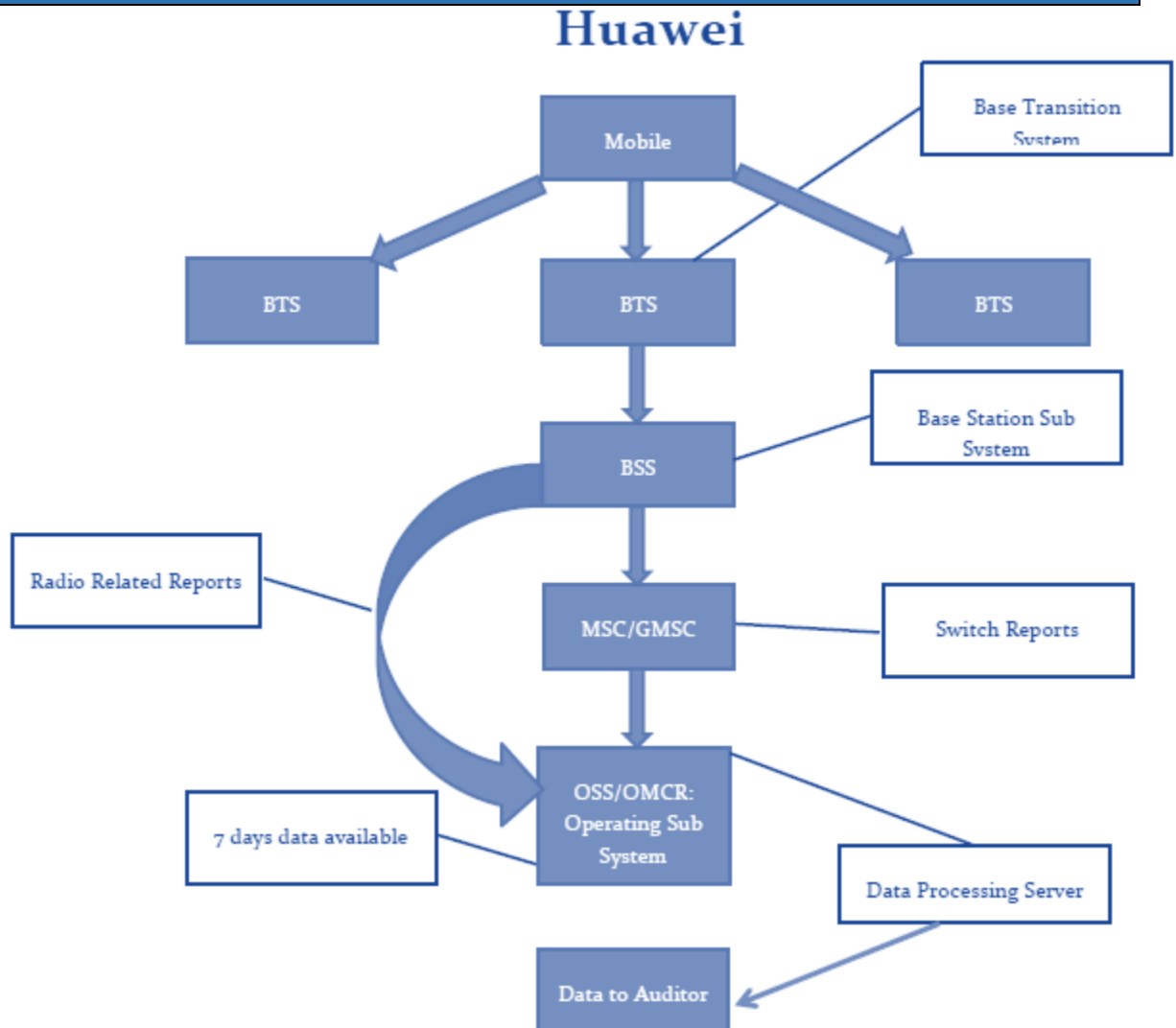
15.1. Ericsson



15.2. NSN



15.3. Huawei



16 ABBREVIATIONS

Following terms/abbreviations have been used in this report. This section provides meaning of the abbreviations used in the report.

- TRAI – Telecom Regulatory Authority of India
- QoS – Quality of Service
- QND'15 – Refers to the quarter of October, November and December 2015
- SSA – Secondary Switching Area
- NOC – Network Operation Center
- OMC – Operations and Maintenance Center
- MSC – Mobile Switching Center
- PMR – Performance Monitoring Reports
- TCBH – Time Consistent Busy Hour
- CBBH - Cell Bouncing Busy Hour
- BTS – Base Transceiver Station
- CSSR – Call Setup Success Rate
- TCH – Traffic Channel
- SDCCH – Standalone Dedicated Control Channel
- CDR – Call Drop Rate
- FER – Frame Error Rate
- SIM – Subscriber Identity Module
- GSM – Global System for Mobile
- CDMA – Code Division Multiple Access
- NA – Not Applicable
- NC – Non Compliance
- POI – Point of Interconnection
- IVR – Interactive Voice Response
- STD – Standard Trunk Dialing
- ISD – International Subscriber Dialing

17 ANNEXURE

17.1. 2G Voice PMR Data: Consolidated

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of BTSs in a month in hrs. in the licensed service area	No. of BTSs having accumulated downtime of >24 hours in a month	Call Set-up Success Rate (Within Licensee own network)	SDDCH/Paging chl. Congestion	TCH Congestion	Call Drop Rate (%age)	Worst Affected cell having more than 3% TCH drop	%age of connection with good voice quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	1.89%	0.27%	97.51%	0.26%	0.65%	0.66%	2.71%	96.89%
Airtel	0.10%	0.13%	97.85%	0.47%	1.19%	0.64%	0.68%	99.20%
BSNL	1.46%	1.73%	97.50%	0.40%	1.22%	1.45%	1.81%	98.57%
Idea	0.04%	0.04%	99.42%	0.23%	0.30%	0.71%	2.07%	96.56%
MTS	0.05%	0.00%	99.18%	NA	0.07%	0.36%	0.50%	99.22%
RCOM CDMA	0.04%	0.14%	97.80%	NA	0.96%	0.13%	0.89%	97.94%
RCOM GSM	0.06%	0.60%	98.81%	0.07%	0.17%	0.11%	0.74%	99.39%
TATA CDMA	0.11%	0.00%	98.57%	NA	0.64%	0.33%	3.99%	98.92%
TATA GSM	0.12%	0.05%	98.34%	0.05%	0.07%	0.59%	3.37%	98.80%
Vodafone	0.06%	0.17%	99.65%	0.18%	0.35%	0.69%	2.42%	96.76%

- TATA CDMA has a parameter value of **3.99%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.
- TATA GSM has a parameter value of **3.37%** and failed to meet the benchmark for Worst Affected cell having more than 3% TCH drop as it is pre-defined at ≤ 3%.

17.2. 3G Voice PMR: Consolidated

Name of Service Provider	Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)		
	Sum of downtime of Node B's in a month in hrs	No. of Node B's having Accumulated Downtime of > 24 hrs in a month	Call Set-up Success Rate (Within Licensee own network)	RRC Congestion	RAB Congestion	Circuit Switched Voice Drop Rate	Worst affected cells having more than 3% Circuit Switched Voice Drop Rate	%age of connections with Good Circuit Switched Voice Quality
Benchmark	≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%
Aircel	NA	NA	NA	NA	NA	NA	NA	NA
Airtel	0.13%	0.42%	98.89%	0.36%	0.50%	0.58%	1.54%	98.89%
BSNL	1.54%	0.96%	95.83%	0.98%	1.71%	1.93%	2.76%	96.36%
Idea	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
MTS	NA	NA	NA	NA	NA	NA	NA	NA
RCOM CDMA	NA	NA	NA	NA	NA	NA	NA	NA
RCOM GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA GSM	NA	NA	NA	NA	NA	NA	NA	NA
TATA CDMA	NA	NA	NA	NA	NA	NA	NA	NA
Vodafone	0.05%	0.11%	99.85%	0.05%	0.02%	0.34%	3.30%	98.97%

- Vodafone has a parameter value of **3.30%** and failed to meet the benchmark for Worst affected cells having more than 3% Circuit Switched Voice Drop Rate as it is pre-defined at ≤ 3%.
- **For each instance of "DNA (Data Not Available)", please refer the respective hard copy of audit report(s).

17.3. Billing and Customer Care

Name of Service Provider	Metering and Billing credibility		Billing Complaints			Termination & Closures	Time taken for refund of deposits after closures	Customer Care		Customer Care & Grievances Redressal	
	Postpaid Subscribers	Prepaid Subscribers	%age complaints resolved within 4 weeks	%age complaints resolved within 6 weeks	%age of credit/weiver is received within one week	% of Termination/ Closure of service within 7 days (100 %)	Cleared over a period of <60 days	%age of calls answered by the IVR	%age of call answered by the operators (voice to voice) within 90 seconds	% of complaints addressed at call center level.	% of complaints addressed by Appellate authority.
Benchmark	≤ 0.1%	≤ 0.1%	≥ 98%	= 100%	= 100%	= 100%	= 100%	≥ 95%	≥ 95%		
Aircel	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	96.19%	94.30%	27.21%	100.00%
Airtel	0.02%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.18%	94.86%	100.00%
BSNL	0.04%	0.04%	100.00%	100.00%	100.00%	100.00%	100.00%	95.58%	96.80%	95.07%	100.00%
Idea	0.06%	0.18%	100.00%	100.00%	100.00%	100.00%	100.00%	99.23%	96.49%	90.58%	DNA
MTS	0.04%	0.02%	100.00%	100.00%	100.00%	100.00%	100.00%	99.94%	95.34%	100.00%	100.00%
RCOM CDMA	0.09%	0.09%	100.00%	100.00%	100.00%	100.00%	100.00%	98.38%	91.47%	100.00%	100.00%
RCOM GSM	0.09%	0.09%	100.00%	100.00%	100.00%	100.00%	100.00%	98.34%	84.12%	100.00%	100.00%
TTSL CDMA	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	97.53%	99.67%	99.73%	100.00%
TTSL GSM	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.64%	99.56%	99.08%	100.00%
Vodafone	0.17%	0.12%	100.00%	100.00%	100.00%	100.00%	60.57%	100.00%	98.66%	27.21%	100.00%

- Aircel has a parameter value of **94.30%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at ≥ 95%

- Idea has a parameter value of **0.18%** and failed to meet the benchmark for Metering and Billing credibility (Pre-paid) as it is pre-defined at $\leq 0.1\%$
- RCOM CDMA has a parameter value of **91.47%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$.
- RCOM GSM has a parameter value of **84.12%** and failed to meet the benchmark for %age of call answered by the operators (voice to voice) within 90 seconds as it is pre-defined at $\geq 95\%$.
- Vodafone has a parameter value of **0.17%** and failed to meet the benchmark for Metering and Billing credibility (Post-paid) as it is pre-defined at $\leq 0.1\%$.
- Vodafone has a parameter value of **0.12%** and failed to meet the benchmark for Metering and Billing credibility (Prepaid) as it is pre-defined at $\leq 0.1\%$.
- Vodafone has a parameter value of **60.57%** and failed to meet the benchmark for Time taken for refund of deposits after closures (Cleared over a period of <60 days) as it is pre-defined at $\geq 100\%$.

17.4. PMR Comparison (TSP vs. Audit Agency): Network Parameters

Name of Service Provider	Network Availability				Connection Establishment (Accessibility)						Connection Maintenance (Retainability)					
	Sum of downtime of BTSs in a month in hrs. in the licensed service area		No. of BTSs having accumulated downtime of >24 hours in a month		Call Set-up Success Rate (Within Licensee own network)		SDDCH/Paging chl. Congestion		TCH Congestion		Call Drop Rate (%age)		Worst Affected call having more than 3% TCH drop		%age of connection with good voice quality	
Benchmark	≤ 2%		≤ 2%		≥ 95%		≤ 1%		≤ 2%		≤ 2%		≤ 3%		≥ 95%	
	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP
Aircel	1.89%	0.11%	0.27%	0.27%	97.51%	97.51%	0.26%	0.26%	0.65%	0.65%	0.66%	0.66%	2.71%	2.71%	96.89%	96.89%
Airtel	0.10%	0.10%	0.13%	0.13%	97.85%	97.86%	0.47%	0.47%	1.19%	1.19%	0.64%	0.64%	0.68%	0.66%	99.20%	99.20%
BSNL	1.46%	1.46%	1.73%	1.73%	97.50%	98.56%	0.40%	0.40%	1.22%	1.22%	1.45%	1.45%	1.81%	1.72%	98.57%	98.57%
Idea	0.04%	0.04%	0.04%	0.04%	99.42%	99.42%	0.23%	0.23%	0.30%	0.30%	0.71%	0.71%	2.07%	2.07%	96.56%	97.51%
MTS	0.05%	0.07%	0.00%	0.00%	99.18%	99.17%	NA	0.00%	0.07%	0.08%	0.36%	0.36%	0.50%	0.50%	99.22%	99.22%
RCOM CDMA	0.04%	0.04%	0.14%	0.14%	97.80%	97.80%	NA	0.00%	0.96%	0.95%	0.13%	0.13%	0.89%	0.88%	97.94%	98.60%
RCOM GSM	0.06%	0.07%	0.60%	0.37%	98.81%	98.81%	0.07%	0.07%	0.17%	0.17%	0.11%	0.11%	0.74%	0.74%	99.39%	99.40%
TATA CDMA	0.11%	0.11%	0.00%	0.00%	98.57%	98.57%	NA	0.00%	0.64%	0.64%	0.33%	0.33%	3.99%	3.99%	98.92%	98.92%
TATA GSM	0.12%	0.12%	0.05%	0.00%	98.34%	98.34%	0.05%	0.05%	0.07%	0.07%	0.59%	0.59%	3.37%	3.37%	98.80%	98.80%
Vodafone	0.06%	0.06%	0.17%	0.24%	99.65%	99.65%	0.18%	0.18%	0.35%	0.35%	0.69%	0.69%	2.42%	2.42%	96.76%	96.76%

- **For each instance of “DNA (Data Not Available)”, please refer the respective hard copy of audit report(s).

17.5. PMR Comparison (TSP vs. Audit Agency): CSD Parameters

Name of Service Provider	Metering and Billing credibility				Billing Complaints						Termination & Closures		Time taken for refund of deposits after closures: Benchmark		Customer Care			
	Postpaid Subscribers		Prepaid Subscribers		%age complaints resolved within 4 weeks		%age complaints resolved within 6 weeks		%age of credit/weiver is received within one week		% of Termination/ Closure of service within 7 days (100 %)		Cleared over a period of <60 days (100%)		%age of calls answered by the IVR		%age of call answered by the operators (voice to voice) within 90 seconds	
Benchmark	≤ 0.1%		≤ 0.1%		≥ 98%		= 100%		= 100%		= 100%		= 100%		≥ 95%		≥ 95%	
	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP	Agency	TSP
Aircel	0.00%	0.00%	0.00%	0.00%	100.00%	100%	100.00%	100%	100.00%	100%	100.00%	100%	100.00%	100.00%	96.19%	96.19%	94.30%	94.30%
Airtel	0.02%	0.02%	0.00%	0.00%	100%	99.69%	100%	100%	100%	100%	100%	100%	100%	100.00%	100%	100%	97.18%	97.18%
BSNL	0.04%	0.04%	0.04%	0.04%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	95.58%	95.00%	96.80%	96.80%
Idea	0.06%	0.06%	0.18%	0.18%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	99.23%	99.23%	96.49%	96.49%
MTS	0.04	0.00%	0.02%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	99.94%	99.94%	95.34%	97.09%
RCOM CDMA	0.09%	0.09%	0.09%	0.09%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.38%	98.38%	91.47%	91.47%
RCOM GSM	0.09%	0.09%	0.09%	0.09%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.34%	98.34%	84.12%	84.12%
TATA CDMA	0.00%	0.00%	0.00%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	97.53%	97.49%	99.67%	99.64%
TATA GSM	0.00%	0.00%	0.00%	0.00%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.00%	98.64%	98.56%	99.56%	98.34%
Vodafone	0.17%	0.18%	0.12%	0.12%	100%	98.03%	100%	100%	100%	100%	100%	100%	60.57%	100.00%	100%	100%	98.66%	98.66%